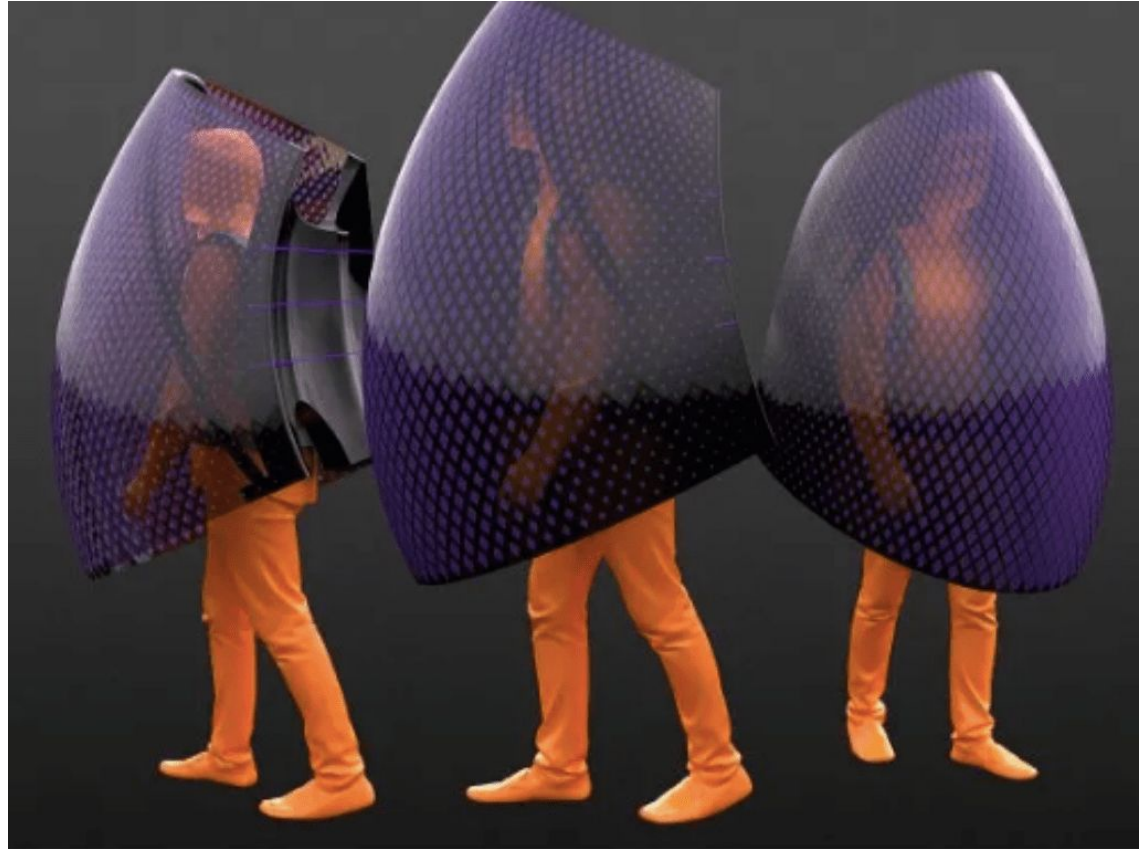


Working Safely At UCSC

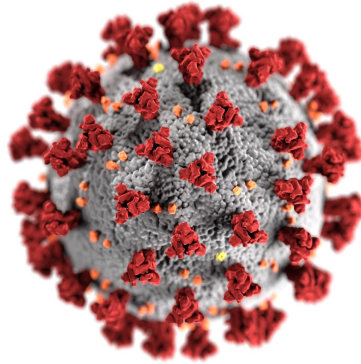
A brief review for labs

The latest EH&S PPE option:

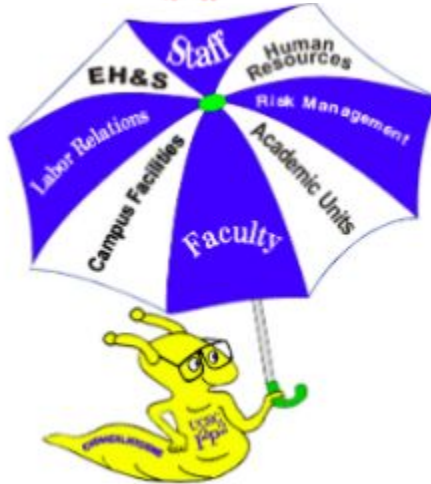
Personal Bio Bubble



IIPP and COVID-19



**Injury
and Illness
Prevention
Program**



**Chemical
Hygiene
Plan**

Injury and Illness Prevention Program

Why are we talking about IIPP?

In California COVID-19 is considered a workplace hazard. Workplace hazards need to be addressed in our IIPP, therefore we need discuss and train for this new hazard.

What is the IIPP?

The Injury and Illness Prevention Program (IIPP) is a written workplace safety program mandated by Cal/OSHA (CCR, Title 8, Section 3203) that addresses hazards in the workplace.

An effective program requires all employees (faculty, staff, and student workers) to identify and report workplace hazards, implement and follow procedures, and complete training to prevent injuries and illnesses.

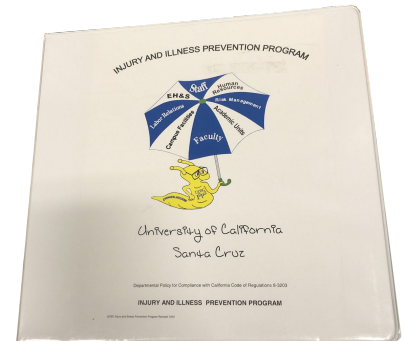
What's in the IIPP?

The IIPP contains at least:

1. Responsibility
2. Compliance
3. Communication
4. Hazard Assessment
5. Accident/Exposure Investigation
6. Hazard Correction
7. Training and Instruction
8. Recordkeeping

And where is my lab's IIPP?

Each lab should have a “Slug Binder”. Typically located at the entrance to the lab or in an adjacent office.



COVID-19 Symptoms

Symptoms may include some, all, or none of the following:

- Chills
- Cough - not associated with seasonal allergies
- Feeling feverish and/or a temperature ≥ 100 deg F
- Muscle or body aches
- Loss of taste or smell
- Shortness of breath or difficulty breathing
- Sore throat
- Fatigue
- Headache
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea



COVID-19 Monitoring

All UCSC employees are required to self-monitor for COVID-19 related symptoms each day before coming to campus.

If you are experiencing symptoms:

DO NOT COME TO CAMPUS

1. Stay at home and self isolate
2. Notify your PI/supervisor
3. Contact your medical provider



How does SARS-CoV-2 spread?

Current evidence indicates three potential routes of transmission of the novel coronavirus.

Route of Exposure	Description	Role in Transmission
Droplet	Respiratory secretions containing the virus are expelled when an infected individual coughs, sneezes, breaths, or speaks. Droplets may land in the mouth, nose, or eyes of someone nearby.	Believed to be the major driver of community spread.
Surface Contact	Droplets containing the virus may settle on surfaces. Contacting that surface then touching the mouth, nose, or eyes may potentially result in transmission of the virus.	Believed to contribute to community spread, but not the primary driver.
Aerosol	Small particles (<5 μm), or droplet nuclei, containing the virus are released into the air and may stay aloft for some time. Aerosols may be present and inhaled in confined or poorly ventilated spaces.	Unclear effect on community spread, but not believed to be a major driver.

Viral Viability

SARS-CoV-2, which causes COVID-19, needs a living host to reproduce in. A new study looks at how long it can last outside the body

As aerosol in the air* Up to 3 hrs



On copper Up to 4 hrs



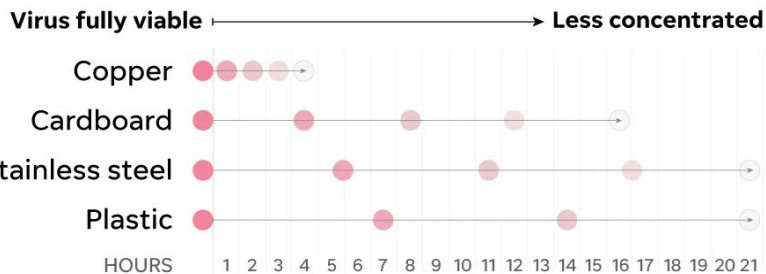
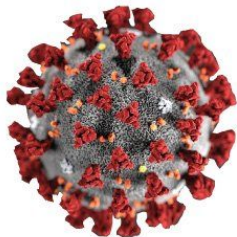
On cardboard Up to 24 hrs



On plastic 2 - 3 days



On stainless steel 2 - 3 days



Study and paper:
New England Journal of Medicine
CDC, NIH, UCLA, Princeton

*Researchers used a nebulizer to simulate coughing or sneezing, and found that the virus became an aerosol

THE NEW ENGLAND JOURNAL OF MEDICINE

CORRESPONDENCE

Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1

TO THE EDITOR: A novel human coronavirus that is now named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) [formerly called 2019-nCoV] emerged in Wuhan, China, in late 2019 and is now causing a pandemic.¹ We analyzed the aerosol and surface stability of SARS-CoV-2 and compared it with SARS-CoV-1, the most closely related human coronavirus.²

We evaluated the stability of SARS-CoV-2 and SARS-CoV-1 in aerosols and on various surfaces and estimated their decay rates using a Bayesian regression model (see the Methods section in the Supplementary Appendix, available with the full text of this letter at NEJM.org). SARS-CoV-1 (nCoV-2019) and SARS-CoV-2 (nCoV-2020) were the most stable, followed by SARS-CoV-1 (nCoV-2019) and SARS-CoV-2 (nCoV-2020) on plastic and stainless steel. SARS-CoV-2 was more stable on plastic and stainless steel than on copper and cardboard. All experimental measurements reported in this letter were performed in a biosafety level 3 laboratory throughout the duration of our experiment (13 hours, until a reduction in infectious titer from 10⁷ to 10³ TCID₅₀ per liter of air). This reduction was similar in that observed with SARS-CoV-1, from 10⁷ to 10³ TCID₅₀ per milliliter of air.

SARS-CoV-2 was more stable on plastic and stainless steel than on copper and cardboard, and viable virus was detected up to 72 hours after application to these surfaces (Fig. 1A), although the virus titer was greatly reduced (from 10⁷ to 10³ TCID₅₀ per milliliter of medium) after 72 hours on plastic and from 10⁷ to 10³ TCID₅₀ per milliliter after 48 hours on stainless steel. The stability kinetics of SARS-CoV-1 were similar (from 10⁷ to 10³ TCID₅₀ per milliliter after 72 hours on plastic and from 10⁷ to 10³ TCID₅₀ per milliliter after 48 hours on stainless steel). On copper, on stable SARS-CoV-2 was measured after 4 hours and on stable SARS-CoV-1 was measured after 8 hours. On cardboard, no viable SARS-CoV-2 was measured after 24 hours and no viable SARS-CoV-1 was measured after 8 hours (Fig. 1A).

WHO'S YOUR LETTER?

- 1664 Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1
- 1667 Epidemiological and Survival Trends in Amyotrophic Lateral Sclerosis, 1987-2019
- 1674 Complete Reversal of Intestinal and Multinodular Foci in Hepatocellular Carcinoma
- 1675 Sclerostin Inhibitors in Ovarian Cancer
- 1676 Sclerostin Inhibitors and the Global Goals
- 1678 A Trial of M72/Ad35 Vaccine to Prevent Tuberculosis
- 1677 Raxofelast Dysplasia

How does SARS-CoV-2 spread?

Not all individuals with COVID-19 will be symptomatic, but virus may be spread by symptomatic and asymptomatic people.

A safe way to approach prevention is to consider that everyone could be infected and all surfaces may be contaminated. Under this scenario precautions are applied universally.



Stay at home if experiencing symptoms. Contact your healthcare provider and supervisor



Avoid close contact with others (keep 6 feet away or more)



Wear a face covering



Clean high-touch surfaces before and after use



Regularly wash or sanitize your hands



Avoid touching your face until your hands are clean

COVID-19 - Cough and sneeze etiquette

Cover your coughs and sneezes



- Cough or sneeze into a tissue whenever possible
- Immediately discard tissue into open, or no-touch, trash can
- Use your elbow if a tissue is not available
- Wash or sanitize your hands after coughing or sneezing

Hand Hygiene

Hand Washing - Best

- Wash your hands often and with soap and water - at least 20 seconds

Hand Sanitizer - Good

- If soap and water are not available use a hand sanitizer that contains at least 60% ethanol
- Cover all surfaces of your hands and rub together until they feel dry

Avoid touching your eyes, nose, or mouth with unwashed hands.



Workplace Hygiene

- Elevators should be single occupancy, or avoid using when possible
- Only one person per bathroom
- Food prep areas can be used but eating in shared spaces should be avoided
 - Avoid sharing personal items (e.g., dishes, cups, utensils, towels)
- Maintain distancing in public spaces



**One-Person
Limit**

Elevator rider must wear a
face covering.

**Stay
Right.**



Stay safe by staying to the right.

Use the right-hand door. Walk on
the right-hand side of the corridor.

**For Food
Prep and
Storage
Only**



No congregating.
Maintain physical distancing.

Face Coverings



Cloth face coverings must:

- Cover your nose, mouth, and chin
- Be secured with ties, ear loops, or wrap around head
- Include multiple layers of fabric
- Allow for breathing without restriction
- Not have one-way valve



Tips:

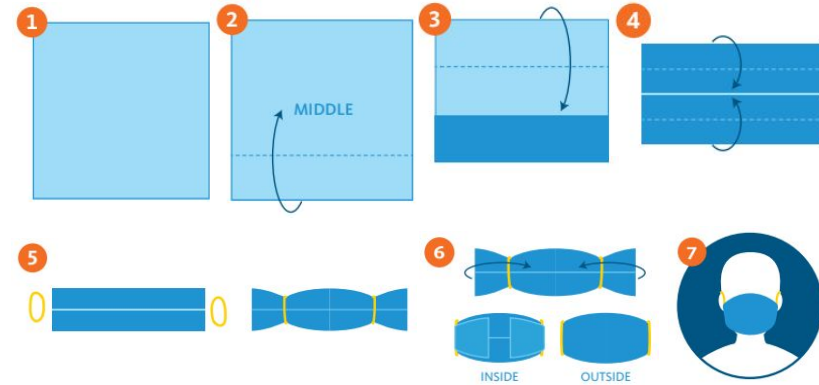
- Clean your hands before and after touching you face cover
- Avoid touching your face, eyes, and nose when removing
- Store in a bag when not in use



Face Coverings

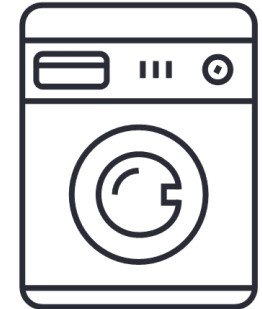
Resources

- [CDC guidance on face coverings](#)
 - How to wear, wash/dry, and make



Care and Maintenance

- Wash with soap and water daily after use
- Hand wash and allow to air dry overnight
- Can also machine wash and dry
 - Use Delicate cycle



Cleaning and Disinfection

Ecolab - Peroxide Multi Surface Cleaner and Disinfectant

- Spray bottles are **diluted to the proper concentration for immediate use.**
 - Shelf life is **18 months.** If the bottle is not dated, label with the **date upon receipt.**
- Disinfectant application is expected for use **between shifts: at the beginning of work and after work for each researcher.**
- **Common/shared equipment should also be decontaminated after each use.**
 - More sensitive equipment can be disinfected by spraying a towel and then wiped.
- **Contact time is 5 minutes** for hydrogen peroxide disinfectant.
 - After the contact time, the product can be wiped off.
 - SARs-CoV disinfection within 1 minute.
- You are encouraged to use the **campus refill/exchange program** for disinfectant.



[SDS Information](#)

Cleaning and Disinfection - Alternatives for lab disinfection

70% ethanol (EtOH)

- General disinfection requires **20 minutes contact time**, re-application may be needed.
- Disinfection of coronaviruses considerably shorter, 1 minute.¹
- **Shelf life at room temp: 1 year (12 months).**
- [SDS Information](#)

10% bleach

- General disinfection **requires 5-10 minutes contact time (30 minutes for spore formers).**
- Disinfection of coronaviruses considerably shorter, 1 minute.¹
- **Corrosive**, can pit stainless steel surfaces.
 - Should be rinsed with sterile water or 70% EtOH to remove residue after use.
- **Shelf life at room temp: 30 days.**
- [SDS Information](#)

1. [https://www.journalofhospitalinfection.com/article/S0195-6701\(20\)30046-3/fulltext](https://www.journalofhospitalinfection.com/article/S0195-6701(20)30046-3/fulltext)

Parting Guidance

Wear a Facial Covering

Cover your nose and mouth.



Don't Touch Your Face

To prevent transmission, cough or sneeze into a tissue or your elbow.



Wash Your Hands Frequently

for a minimum of 20 seconds.

Maintain Social Distancing

with a minimum of six feet in distance.





**If you are experiencing
symptoms or have been around
others who have symptoms**

**Stay
Home.**

Summary Info

- **Keep your distance.** A minimum social distance of 6-8 feet is standard. More is better.
- **Wash your hands.** Wash frequently and vigorously with soap and water for 20 seconds.
- **Wear a face covering.** This is required, and protects those around you. A simple bandana will suffice.
 - Keep it with you at all times so it will be readily available to wear when needed.
- **Sneeze into your elbow.** Or use a tissue and then toss it in the trash. Wash your hands afterward!
- **Don't touch your head or face.** Wash hands frequently and vigorously to prevent infection.
- **Avoid contacting frequently touched surfaces,** such as **shared tools, appliances,** vehicles, etc. Wash your hands after handling such items. Use hand sanitizer until you can wash with soap and water.
- **Only enter a space you are authorized to be in.** To the extent possible, sanitize touched surfaces and wash your hands before you leave.
- **Talk to your coworkers before beginning operations.** What's the plan? Is everyone healthy? Is anyone feeling ill? Can you agree on distancing?
- **If you cannot follow these guidelines** for a particular job, then **don't do that job.** Your health, and the health of our community, are the top priorities. Talk with your supervisor.

Summary Info

- **Avoid using the same tools and equipment as others**, if possible. If you must share, wipe the items down with alcohol before use, or wash/sanitize your hands after use.
- **Social distancing applies at all times!** If you are not able to do this, you need to identify the tasks in which you need to work in close proximity to another worker and get authorization from your line management to do so.
- **You must be approved by your supervisor to enter your work area(s).**
 - Your supervisor should be aware of your intent to go to your work area as well as who you will be working near.
- **You must stay home and self isolate for *at least 14 days* if you are ill or have been exposed to someone who is ill.**
- - If you suspect you have been infected, notify your supervisor.

These controls will be effective if employees remain mindful of the importance of ongoing infection control. If you are uncomfortable with any activities that need to be performed, contact your Supervisor to discuss.