

# Guidelines for Research Lab Use During the COVID-19 Pandemic

## Scope

The guidelines outlined in this document will assist in the development of Standard Operating Procedures (SOPs) related to **Research Lab Use** and will help to ensure the appropriate COVID-19 health and safety considerations for the protection of all members of the McMaster community.

The University recognizes that research has continued in earnest since the on-campus restrictions were imposed and applauds the research community for continuing to advance their work from off-site. Working from home remains the preference but, as some research cannot possibly be done off campus, the University has planned for a gradual, phased return of on-campus research.

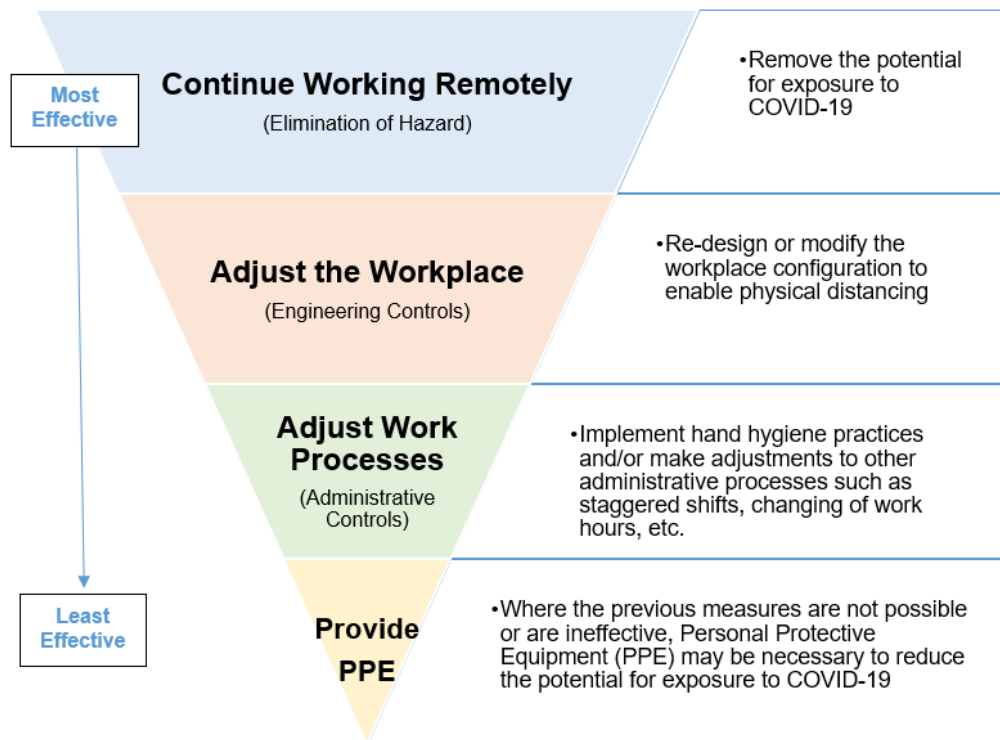
Phase 1 does not signal a return of researchers for any reason other than to perform research that is impossible to perform in a remote manner. No individual will come to campus to take part in activities that include (but are not limited to) group or individual meetings, literature reviews, paper writing, grant preparations, thesis defenses, comprehensive exams, etc. Similarly, while trained undergraduates, graduate students and postdoctoral fellows will be permitted to work on campus as described below, “hands on” training of such individuals is not permitted.

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## Hierarchy of Hazard Control

Hazard mitigation should always focus on implementing control measures to eliminate or reduce risk. For this purpose, the hierarchy of controls must be considered. This hierarchy can be applied to any hazard in the workplace including COVID-19. A brief overview of this concept is highlighted below.



It is important to remember that Engineering and Administrative Controls must always be considered prior to implementing personal protective equipment (PPE) to eliminate/reduce the risk. PPE only provides a barrier between the individual and the hazard and is dependent on the user to utilize it properly.

Resuming research at McMaster should take the following into consideration:

**First - Engineering Controls:** includes designs or modifications to workstations, systems or processes that reduce the source of exposure.

**Second - Administrative Controls:** controls that alter the way the work is done, including timing of work, policies and procedures, and work practices such as standards operating procedures (including training, housekeeping, and equipment maintenance, and personal hygiene practices).

**Third - Personal Protective Equipment:** equipment worn by individuals to reduce exposure to the hazard (ex. chemicals, noise, etc.).

This document is specific with respect to returning to labs and graduate student offices. McMaster follows the guidelines established by Public Health Ontario which has not mandated the use of personal face masks. Individuals who choose to use them (non-medical or cloth) may do so at their own accord, but the University will not be providing them at this time. Supervisors will provide employees with the necessary PPE in research settings where masks and other forms of PPE have normally been required, in healthcare facilities such as hospital settings which have additional requirements, and for designated facilities and services operations in specialized and approved circumstances. Additional information on personal face masks is available on the [Environmental and Occupational Health Support Services \(EOHSS\) website](#).

## **Guidelines for all Labs**

### **Physical State of Labs**

1. Water may not have been run in the labs for weeks. Sinks, including pot sinks, may have air pockets due to shut offs – at first use turn taps on slowly and run until clear. Ensure the flushing of the eyewash/showers for at least 15 minutes.
2. Check all rubber tubing before connecting to glassware – it may have dried out and cracked. Replace as necessary.
3. Check all solvent stills and peroxide formers before using. Consider hazardous waste disposal as necessary.
4. Drain traps may have dried out – this will create a sewer gas odour in some labs. Pour water down the floor drains to refill the traps (running the sinks will have helped but some floor traps may be missed). Contact [Facility Services](#) for trap oil which will float on top of the water and prevent it from drying out.

### **Working in the Labs**

1. Physical distancing (2m) continues to apply – The physical restructuring of the lab may be necessary to ensure physical distancing. For example, move balances to opposite ends of the lab. Move centrifuges or other equipment away from fume hoods or areas where others work regularly to avoid close proximity of students and staff.
2. Space individuals out in the labs and or create a schedule to limit the number of individuals in the lab as well as any office space as per the Public Health Ontario guidelines. Use a scheduling program such as Outlook so that all group members know when and how many people are in the lab at all times.
3. If necessary, limit research to certain days or stagger work for your group depending on its size. For example: 15' of linear bench space = 2 people working at the bench. If the bench is an island, 2 people on one side, one person on the other side, in a triangular arrangement, is acceptable. One 6' hood is now the space for one researcher; however, they should only use the space normally occupied in a hood so that additional

researchers can use the hood during their scheduled times. Ensure the proper sanitization of all surfaces prior to and after completing work.

4. Pairing of researchers (this does not mean working in pairs) may be necessary to accomplish research projects if on-going experiments require working beyond designated shifts or scheduled times. This pair must have a thorough understanding of the other's research to be able to properly take over the on-going experiment – this should be highly documented.
5. Some tasks/experiments may be limited or not possible during this time due to the physical distancing requirements. Organize and plan accordingly. Clearly outline what tasks/experiments cannot be performed. Researchers in the labs should check in regularly with their supervisors.
6. Hand washing or sanitizing, where handwashing is not possible, is extremely important – washing hands at least 20 seconds with soap and water or using an alcohol-based hand sanitizer. Wash your hands as soon as you enter and before you leave the lab. Custodial staff will be increasing the frequency of cleaning highly touched surfaces such as door handles, elevators and washrooms. Cleaning within the labs is the responsibility of the occupants. Wipe down your benches, equipment, sashes, knobs, keyboards, etc. at the end of each person's use and each day. Place signs or label shared equipment with reminders to wipe down prior to and after using.
7. Regular PPE necessary for the lab environment should be provided as usual by the PI or supervisor. Ensure an adequate supply is available before starting experiments. PPE that is shared such as laser safety eyewear should be disinfected after each use. Develop a system to indicate this - label the pouches 'sanitized' for example. Do not share lab coats - assign/label and provide to individuals. Lab gloves should not be worn outside the lab. Use a pen or elbow to activate door openers and elevator buttons.
8. If lab occupants are observing physical distancing and hand washing/sanitizing as per the Public Health guidelines, no further PPE is necessary, and it will not be provided by the University. If physically distancing is not possible within the lab under normal operations, work should be scheduled to accommodate this practice. If this means working alone in the lab, an appropriate Working Alone Procedure must be submitted to the lab supervisor (see [RMM 304: Working Alone Program](#)).
9. Shared infrastructure that is located either in a researcher's lab or common space must also abide by the physical distancing rules and must be sanitized after each use. There should be mechanisms in place to book this shared infrastructure to ensure it can be accessed in a safe manner and following the guidelines discussed herein.

### **Graduate Student and Research Offices**

Recognizing that offices for researchers will be necessary due to the restrictions on storage of food and personal belongings in lab spaces, at this time the office spaces will be used for this purpose only. The regular use of offices should be limited until further progression through the phases of returning to campus. At which point the guidelines below must be applied.

## Working in the Offices

1. Physical distancing (2m) continues to apply – if desks are 6’ apart and there are 5 or fewer people in the office, no changes may be necessary – consider the back to back distances as well as entering and leaving the office - maintain the 6’ at all times. What was normally a 4-person office space may now only be a 2-person space. Directional arrows and signage may be necessary.
2. Utilize unused offices to create additional space.
3. Conference rooms and meeting rooms should also be used as temporary office spaces.
4. Rotating of lab/office times or shifts for work may be necessary – work out what is best for the research you do.
5. Consider temporary “office hoteling” space – no office belongs to any one person but is used temporarily each day by a different person. This will maximize office space; however, good house cleaning practices are extremely important - wipe down surfaces before you leave.
6. Encourage people to bring their lunches and beverages and keep them at their desks. Shared appliances such as fridges, microwaves and coffee makers should be removed or made inaccessible.
7. If occupants are observing physical distancing and hand washing/sanitizing as per the Public Health guidelines, no PPE is necessary, and it will not be provided by the University. If physical distancing is not possible within the offices under normal operations, work should be scheduled accordingly to accommodate this practice with people continuing to work from home wherever possible. There should be no circumstances where face masks or gloves are necessary while working in offices as controls such as physically rearranging, relocating and scheduling will prevent this. Use elbows and pens to push door openers and elevator buttons - do not wear lab gloves outside of the labs.

## Resources

- Government of Canada [Digital Tools](#)
- [Public Health of Ontario](#)
- [Government of Ontario](#)