

Respiratory Protection Guidelines During Phased Recovery

The US Centers for Disease Control and Prevention (CDC) recommends various mitigation strategies for the general public to help protect against COVID-19 infection. These strategies include that members of the public:

- Understand how the virus spreads
- Practice proper hand hygiene
- Practice social distancing
- Wear face coverings when in public
- Practice respiratory etiquette
- Clean and disinfect commonly touched surfaces

Regarding the wearing of face coverings, the CDC recommends:

- Everyone should wear a face cover when around others
- Cloth face covers are meant to protect others in case you are sick
- Do not use face masks that are reserved for healthcare workers and emergency responders
- Continue to practice social distancing while wearing face coverings; the cloth face covering is not a substitute for proper social distancing

In line with federal and state recovery plans, the NJIT recovery plan describes a phased recovery of campus operations with more faculty, students, and staff expected to be on campus as we progress through the phasing process. It is anticipated that cloth face coverings will be required throughout phase 0, phase 1, and phase 2 of the recovery process. The cloth face coverings recommended by the CDC are appropriate to be worn for most office, classroom, and campus activities during recovery. However, there may be certain situations where disposable face coverings, face masks, or enhanced respiratory protection are required, including:

- Enhanced Respiratory Protection - Respiratory Protection worn by Public Safety, Facilities, Residence Life, and others who may be engaged in activities that necessitate a higher level of protection. Please note the following:
 - For those wearing surgical masks or surgical style masks (below the N-95 level of efficiency), EHS has provided Respiratory Protection Awareness Training and asked wearers to complete the Voluntary Use Form for Respirators.
 - For those wearing respirators of N-95 level of efficiency and higher, EHS has provided Respiratory Protection Training in conformance with the OSHA Respiratory Protection Standard and has required medical evaluation to determine fitness to wear respirators and has performed qualitative fit testing to determine proper respirator fit for each wearer and respirator.
- Disposable Face Masks for Laboratory Settings – Due to the presence of a variety of potentially hazardous materials present in research and instructional laboratories, reusable cloth face masks may not be ideal for laboratory activities. This is due to the possible contamination of the cloth face covering with potentially harmful laboratory reagents including chemical, biological, or radioactive materials. Additionally, existing laboratory safety protocols must continue to be enforced during the recovery process, including:

- Not wearing used PPE outside of the laboratory setting to prevent the dissemination of contamination outside of the laboratory
- Not touching common surfaces (such as door handles, elevator buttons, water faucets, etc.) outside the laboratory with potentially contaminated gloved hands
- After completing experiments in the lab, used gloves should be removed and discarded properly within the laboratory prior to exiting
- Laboratory coats should never be worn outside the lab
- Laboratory coats should not be laundered at home
- Please note that there may be exceptions to some of these provisions such as:
 - The transport of samples between labs and between buildings. In these situations, laboratory workers should be following a written Standard Operating Procedure (SOP) for specimen transport that takes the above items (and others) into consideration.
- For the reasons described above, EHS recommends disposable face masks for use in the laboratory setting.

Respirator Use Requirements

- Selection of Respirators
 - Cloth Face Coverings: As stated above, the CDC recommends the wearing of fabric face coverings for all Americans when out in public.
 - The CDC recommends that cloth face coverings **SHOULD**:
 - cover your nose and mouth
 - fit snugly but comfortably against the side of face
 - be secured with ties or ear loops
 - include multiple layers of fabric
 - allow for breathing without restriction
 - be able to be laundered and machine dried without damage or change to shape.
 - The CDC also recommends that cloth face coverings **SHOULD NOT**:
 - not be placed on young children under the age of 2
 - not be worn by those with trouble breathing
 - not be placed on anyone who is unconscious, incapacitated, or otherwise unable to remove the fabric face covering without assistance
 - CDC recommendations include a reminder that cloth face coverings are not surgical masks or N-95 respirators which are considered critical supplies to be reserved for emergency responders and medical personnel.
 - The cloth face coverings recommended by the CDC are appropriate to be worn for most office, classroom, and campus activities during the phased recovery of NJIT's operations.
 - Understand the limits of respiratory protection. It is important that personnel wearing face masks of respirators understand the type of hazard the face mask or respirator is designed to protect against. For example, a dust mask may offer protection against dust and particulates but offers no protection against chemical vapors.

- Surgical masks, surgical style masks, and disposable face masks below the N-95 level of efficiency: There may be certain campus activities that require a higher level of respiratory protection such as those performed by Public Safety, Facilities Services, Facility Systems, Residence Life personnel, for example, where surgical masks or surgical style masks (below the level of N-95 efficiency) are appropriate. Additionally, there may be certain campus activities (for example working with potentially hazardous materials in a research or instructional laboratory) where disposable face masks are appropriate.
- As all types of disposable face masks are difficult to procure during the ongoing COVID pandemic, construction style dust masks should be considered as an acceptable alternative for disposable face masks used in the laboratory or other settings where a disposable alternative to cloth face coverings may be needed.
- Respirators at or above the N-95 level of efficiency: There are certain campus activities that may require enhanced levels of respiratory protection. These activities may include medical assistance provided by Public Safety personnel and other aspects of emergency response. In these situations, N-95 filtering facemasks or higher levels of respiratory protection are appropriate.
- As stated previously, the use of N-95 filtering face masks or higher levels of respiratory protection is performed in accordance with the OSHA Respiratory Protection Standard (29 CFR 1910.134). This standard has also been adopted for public employees in the state of New Jersey by Public Employees Occupational Safety and Health (NJ PEOSH). The Respiratory Protection Standard requires the following main elements:
 - Implementation of a Respiratory Protection Program
 - Training on respirator selection, limitations, care, use, cleaning, and storage
 - Medical evaluation to determine fitness to wear a respirator
 - Fit testing of personnel for the specific respirator to be worn
- Donning and Doffing Face Masks and Respirators
 - Donning refers to putting on the face mask or respirator.
 - Read product inserts and become familiar with the make and model of your face mask or respirator. Follow manufacturer's instructions that are specific to your face mask or respirator model
 - Inspect respirator prior to donning. If respirator is worn or torn do not use it and replace it with a new one
 - Do not allow anything to come between your face and the respirator, this is to ensure a proper seal. Common items that prevent a proper respirator seal include facial hair (e.g., beards), hair, jewelry, glasses, clothing, etc.
 - Prior to donning a face mask or respirator, personnel should practice appropriate hand hygiene (e.g., wash hands with soap and water for at least 20 seconds)

- With a clean hand, hold the face mask or respirator to your face, covering both your nose and mouth
- For face masks or respirators with ties:
 - With clean hands adjust the ties
 - First, secure upper tie across the crown of your head
 - Then secure the lower tie behind your head below ear level
 - Use both hands to properly form nose clip or wire to create a secure comfortable fit – do not pinch with one hand
 - Make final adjustments until the face mask or respirator feels secure
 - Some tight-fitting disposable respirators will have the ability to perform fit checks – see fit check, below
- For face masks or with straps:
 - With clean hands adjust the straps
 - First, secure the lower strap behind your head below ear level
 - Then secure upper strap across the crown of your head
 - Use both hands to properly form nose clip or wire to create a secure comfortable fit – do not pinch with one hand
 - Make final adjustments until the face mask or respirator feels secure
 - Some tight-fitting disposable respirators will have the ability to perform fit checks – see fit check, below
- For face masks with ear loops:
 - With clean hands and with the printed or color side of face mask facing out and nose clip facing up, handle face mask by the ear loops
 - Place ear loops securely around ears
 - Pull the mask from top to bottom to fully open the folds
 - Adjust face mask around face
 - Gently form nose clip or wire with both hands. Do not pinch with one hand
 - Make final adjustments
- Fit Check or Seal Check.
 - Some tight-fitting disposable respirators will have the ability to perform fit checks, also known as seal checks, once they are donned. There are two types of fit checks that can be done by the wearer.
 - Negative Fit Check:
 - Place both hands completely over the respirator and inhale quickly to see if the respirator fits tightly to the face
 - The wearer should notice the respirator bow inward slightly and become somewhat concave
 - Positive Fit Check:
 - Place both hands completely over the respirator and exhale to check if there is leakage

- If air is leaking around nose, re-adjust nose piece, nose clip or wire depending on respirator type.
 - If air is leaking at the mask edges, re-adjust straps along the sides of the face until a proper seal is achieved
- Doffing refers to taking off the face mask or respirator.
 - Prior to doffing (removing) a face mask or respirator, personnel should practice appropriate hand hygiene (e.g., wash hands with soap and water for at least 20 seconds)
 - Do not touch the outside front surface of the face mask or respirator as it may be contaminated
 - Handle face mask or respirator by the straps, ties, or ear loops depending on the type of face mask or respirator being worn
 - Carefully place face mask or respirator in a clean breathable bag if it is to be re-used or place in appropriate waste container for disposal.
- Please refer to the diagrams and links at the end of this document depicting donning, doffing, and fit check techniques.
- Storage of Face Masks and Respirators
 - All face masks and respirators that are to be re-used should be placed in a clean breathable bag for storage. For face masks and respirators that are to be re-used it is important to allow them to dry following use. Zip lock bags keep items clean, but they trap in moisture and prevent evaporation. Paper bags that will keep the face mask or respirator clean and allow the evaporation of moisture should be used as an alternative.
 - Individuals should write their names on the storage bag. Face masks or respirators should never be shared between wearers.
 - Tight fitting respirators should be stored in a way that maintains its shape. They should not be dented or crushed as this will affect the respirator's ability to seal properly.
- Disposal of Face Masks and Respirators
 - In the laboratory setting, used disposable face masks or respirators may be discarded as Non-Hazardous waste in the same manner that used gloves, or incidentally contaminated labware is disposed.
 - In the office setting, used disposable face masks or respirators may be discarded in a dedicated container lined with a plastic bag. When full, the plastic bag may be tied closed and placed in the regular trash for routine pick-up and disposal. Pre-sealing in a plastic bag

will prevent others who collect and handle the waste downstream from coming into direct contact with the material.

- Respirators used by Public Safety or other emergency responders involved in a medical call pertaining to a COVID-19 patient should be disposed as regulated medical waste. Public Safety has been provided with appropriate containers and labels for disposal.
- After disposing any face mask or respirator, personnel should practice appropriate hand hygiene (e.g., wash hands with soap and water for at least 20 seconds)

Diagrams:

- Donning a Surgical Mask with Ties
 - Courtesy of the Kimberly Clarke Corporation
- Donning a Surgical Mask with Ear Loops
 - Courtesy of Precept Medical Products, Inc.
- Donning a Surgical Respirator or Dust Mask with Straps
 - Courtesy of Precept Medical Products, Inc.

Links:

- How to Properly Put On, Seal Check, and Take Off as Disposable Respirator (CDC/NIOSH)
 - <https://www.cdc.gov/niosh/docs/2010-133/pdfs/2010-133.pdf>

Donning a Surgical Mask with Ties

- With a clean hand, hold the face mask or respirator to your face, covering both your nose and mouth
- For face masks or respirators with ties
- With clean hands adjust the ties
- First, secure upper tie across the crown of your head
- Then secure the lower tie behind your head below ear level
- Use both hands to properly form nose clip or wire to create a secure comfortable fit – do not pinch with one hand
- Make final adjustments until the face mask or respirator feels secure
- Some tight-fitting disposable respirators will have the ability to perform fit checks



Note: Various manufacturer's offer specific guidance on their products. In this case, the Kimberly Clarke Corporation recommends pre-fitting the nose clip prior to securing the upper ties.

Donning a Surgical Mask with Ear Loops

- With clean hands and with the printed or color side of face mask facing out and nose clip facing up, handle face mask by the ear loops
- Place ear loops securely around ears
- Pull the mask from top to bottom to fully open the folds
- Adjust face mask around face
- Gently form nose clip or wire with both hands. Do not pinch with one hand
- Make final adjustments



Donning a Surgical Respirator or Dust Mask with Straps

- With a clean hand, hold the face mask or respirator to your face, covering both your nose and mouth
- With clean hands adjust the straps
- First, secure the lower strap behind your head below ear level
- Then secure upper strap across the crown of your head
- Use both hands to properly form nose clip or wire to create a secure comfortable fit – do not pinch with one hand
- Make final adjustments until the face mask or respirator feels secure
- Some tight-fitting disposable respirators will have the ability to perform fit checks

