DOES WEARING A MASK HELP PREVENT THE SPREAD OF COVID-19?

Keeping a distance (at least six feet) from other people is our best protection against COVID-19; however, wearing a mask can add another layer of protection. Masks can help protect others by containing respiratory droplets when the mask wearer coughs, sneezes or speaks.

Recent studies indicate that a portion of individuals with coronavirus lack symptoms (“asymptomatic”) and that those who eventually develop symptoms (“pre-symptomatic”) can transmit the virus to others before showing symptoms. Public health officials believe that mask use by non-healthcare workers can help decrease the spread of COVID-19, even if the individual wearing the mask is not showing symptoms.

It is not clear whether masks worn by non-healthcare workers can prevent an individual from getting infected with the virus that causes COVID-19.

Before deciding whether to wear a mask, keep two considerations in mind:

- **Surgical/medical masks should be reserved for healthcare providers** who are on the front lines working to protect us all. There are shortages of these masks and it's critically important that healthcare workers have the equipment they need to do their jobs.
  - Surgical/medical masks may be used by UMass Boston employees doing work to support critical operations that requires them to be on site but may not be able to maintain a distance of at least six feet between themselves and others at all times.

- **Non-surgical/medical mask use (e.g., cloth or fabric mask) does not replace the need to follow guidance to stay home and limit our contact with others.**
  - Data on the use of masks to prevent COVID-19 transmission in non-health care settings is limited.
  - Wearing a cloth mask does not replace frequent handwashing, avoiding touching the face, and staying away from people who are ill. These are the most important steps to prevent the spread of COVID-19 illness.
  - For the general public, homemade fabric masks, especially if well-made and fit snugly, may provide some benefit.
WHAT IS A SURGICAL/MEDICAL MASK?

- A surgical/medical mask is a loose-fitting disposable protective mask that covers the mouth and nose, and is generally designed for use in a healthcare setting. They may also be called dental, isolation, laser, medical, procedure, or simply facemasks. They are attached to the face either by elastic loops over the ears, or by two ties at the neck and back of the head.

- Surgical/medical masks are tested by the American Society for Testing and Materials (ASTM) on how their material is resistant to fluid and particle penetration to ensure they provide adequate protection. They are considered medical devices, and must go through an approval process with the Food and Drug Administration (FDA).

WHAT ARE THE BENEFITS OF WEARING A SURGICAL/MEDICAL MASK?

- They are very effective at preventing potentially infectious droplets from spreading when worn by a sick person.
- They keep individuals from touching mucous membranes (mouth and nose) with their potentially contaminated hands.
- They prevent large droplets, splashes or sprays that may occur during work from contacting mucous membranes.

WHAT ARE THE DRAWBACKS OF WEARING A SURGICAL/MEDICAL MASK?

- They do not seal around the mouth and nose, and therefore do not prevent you from inhaling smaller airborne particles. Leakage occurs around all edges of the mask. This means they do not filter or block very small particles in the air that may be transmitted by coughs, sneezes, or certain medical procedures. Those who are exposed to these kinds of aerosols at work will need to wear a tight-fitting respirator, such as an N95. (Infographic: Understanding the difference between surgical masks and N95 respirators)
- They can only be worn once, and must be disposed of after use or after becoming contaminated. They cannot be effectively disinfected.
- Some may find them difficult to breathe through.
- They need to be put on (donned) and taken off (doffed) correctly in order to work appropriately and minimize exposure risk; this is especially important while doffing, since the outside of the mask may be contaminated.

HOW DO I WEAR A SURGICAL/MEDICAL MASK CORRECTLY?

1. Wash your hands, use hand sanitizer and/or put on a clean pair of gloves prior to donning the mask.
2. Identify the “inside” of the surgical/medical mask- this should be white. This side faces your mouth. The blue or colored side faces out. The metal noseband should be on the top.
3. With white side facing in and noseband on the top, place the loops around the ears or tie the straps at the neck and at the crown of your head.
4. Pull the top and bottom of the mask to expand the folds. The top of the mask should extend above your nose, and the bottom should extend below your chin.
5. Pinch or press the noseband so that it conforms to your nosebridge.
6. Do not touch the mask if possible while wearing. If you do touch it, do so with gloved hands, or wash your hands immediately before and after.

7. Do not eat, drink, or smoke while wearing the mask.

8. Remove the mask from the face carefully, touching only the bands and not the outside surface. The outside surface should not come into contact with your face; avoid pulling the mask up over your forehead or down over your chin.

9. Dispose of the mask when soiled or wet. Wash hands or use hand sanitizer after taking the mask off.

WHAT ABOUT WEARING CLOTH OR HOMEMADE MASKS?

- Wearing a fabric mask can help prevent the spread of infection to others when the mask is worn by someone who already is infected with the virus that causes COVID-19, even if they don’t have symptoms and don’t know they are infected. The mask will block infectious droplets from spreading when an infected person wearing a mask coughs, sneezes and, to a lesser degree, speaks.

- It is not known how much protection homemade cloth masks provide to the person wearing the mask, and this may depend on the quality of the mask and how well it fits. For this reason, homemade and fabric masks should not be considered reliable protection but may provide some benefit.

- To be effective, masks should be worn consistently and properly so as not to contaminate the hands or face of the user, and fabric masks should be changed when moist and washed after use. Masks that have been worn may be biologically contaminated.

- The CDC has recently advised that wearing cloth masks may be a valuable tool for reducing infection rates in public places.

- Cloth masks may provide some of the same benefits as a surgical/medical mask (minimizing splash/droplet contact with the nose and mouth, preventing spread of your own cough/sneeze droplets). However, they are not a substitute for existing guidance to maintain 6-feet of physical distance and to wash hands frequently and refrain from touching your face.

- Cloth masks are not a replacement for surgical/medical masks; they aren’t regulated by any performance criteria, and don’t provide the same level of protection in terms of moisture resistance and particle penetration. For this reason, wearing cloth masks is most appropriate under the following circumstances:
  - The work in question is low-risk for potential exposure to COVID-19 positive individuals and/or other social distancing measures can be implemented successfully.
  - Outside of work, in public settings where social distancing is difficult to maintain.

- Cloth masks may not be appropriate in work environments with existing policies on PPE. This includes considerations for infection prevention or biosafety (e.g., inside a vivarium or a biosafety level 2 lab). Cloth masks can’t be adequately decontaminated, and a disposable surgical mask may be required.
- The standard steps for wearing a surgical/medical mask apply to wearing cloth masks, including washing hands before donning and doffing.
- Cloth masks must be laundered regularly and whenever potentially contaminated in order to prevent exposure for the individual wearing it.

RESOURCES

✓ A video on correctly donning and doffing a surgical mask
✓ A video on how to correctly use a cloth mask
✓ FDA comparison of surgical masks and N95s
✓ OSHA video comparison of surgical masks and respirators
✓ CDC: The difference between a surgical mask and an N95 respirator
✓ World Health Organization guidance video on the public/non-healthcare wearing of surgical masks

Wearing a surgical/medical mask does not replace the need to follow guidance to stay home and limit our contact with others. It does not replace frequent handwashing, avoiding touching the face, and staying away from people who are ill. These are the most important steps to prevent the spread of COVID-19 illness.

Please contact OEHS at umbehs@umb.edu with questions.