

Gowns, Masks, and Gloves, Oh My: What you need to know about PPE in the time of COVID-19

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The COVID-19 pandemic has made Personal Protective Equipment (abbreviated “PPE”) a hot topic, but one that can be confusing, especially for those who don’t regularly use PPE in their line of work. This article will attempt to explain what PPE is and what it can include, and why it is now so important in helping to stop the spread of COVID-19.

Masks, gloves, gowns, eye protection, and other equipment are all part of PPE. If you have ever had a family member in the hospital with an infection, or undergoing a surgical procedure, you may have been asked to don some PPE before entering their room to visit, and to remove it when you leave the room. You may have noticed that all staff entering the room do the same. This is done for several reasons: to protect the patient, to prevent the healthcare team from spreading infection to the other rooms they visit, and to protect people interacting with the patient from becoming infected themselves.

In order to understand how PPE can be used to prevent the spread of COVID-19, let’s break down some of the different wearable items which are most common, and discuss how they are intended to protect the patient, the healthcare provider, or both, from viruses and bacteria (“microbes”):

- **Eye Shields:** Almost solely to protect healthcare providers from splashes of blood or other body fluids, like saliva or phlegm. In addition to N95 masks, eye shields are perhaps the single most important personal protective item that providers need to help fight COVID-19, which is a **respiratory illness that enters, as microscopic droplets from body fluids, through the eyes, nose, and mouth.** Respiratory droplets can be propelled through the air by a cough or sneeze.



- **Face Masks:** Worn primarily to protect those around the wearer from microbes present in the nose or mouth, a regular face mask is designed primarily to keep microbes INSIDE the mask and away from patients, but still provides some protection against larger particles in the air. The N95 respirator mask, which is a special variety, is designed to keep the smallest microbes OUT, also protecting the wearer. This is why it is important for people who are sick and coughing to wear a face mask of any variety, in order to protect others, but for healthcare providers and others who need to remain uninfected, to have access to N95 respirator masks.



- **Gowns:** When worn to see one patient, and then taken off and discarded, the gown prevents the spread of infections from one place to another, because the provider has essentially “changed clothes” between the infected patient and the non-infected patient.



- **Gloves:** To protect patients from microbes that may be on caregiver hands, AND to protect healthcare providers from any microbes that can enter through small cuts or abrasions on the skin of the hands. Like gowns, when removed and discarded between seeing patients, and not used to touch any other objects outside the room, gloves prevent infection from spreading. Importantly, hands should still be washed after removing gloves.



The key to stopping COVID- 19 is stop the virus from spreading person to person. PPE does that in several ways, but staying the recommended 6 feet away from others in public, and remaining in your home otherwise, also effectively prevent you from exposing others to your respiratory droplets, which can carry COVID-19 even if you do not feel ill, and keeps you safe from exposure.

Healthcare workers need to wear a new set of PPE each time they go from someone infected with COVID-19 to someone who is not infected. Ideally, PPE is supposed be changed out after every single patient regardless of their infectious status There are hundreds of COVID-19 patients being admitted to hospitals in the US every day, so healthcare works need a huge amount of PPE to tackle this crisis. As a citizen staying at home and only going out as necessary, you do not need this amount of PPE if you are not constantly interacting with people who have COVID-19.

What you can do:

- If you yourself are coughing or sneezing and have no choice but to go out, you should wear any kind of mask that will prevent your droplets from reaching others, and still cover your cough or sneeze with your elbow.
- If you are trying not to become infected, the best choice would first be to stay at home, and maintain 6 feet of social distance if you must go out. An N95 mask and an eye shield will help prevent you from becoming infected, but know that there are healthcare workers who must constantly come within inches of COVID-19 patients to examine and treat them, who need these items desperately.

- Hand-washing is the best way to prevent spreading microbes via touch. If you are going to use gloves, change them when you go from touching anything that could be contaminated to something that is not.
- Use PPE wisely, knowing the best option is to first stay home and practice social distancing. It helps our entire society to appreciate that those who urgently need PPE today are those who are serving COVID-19 patients, trying to avoid spreading the infection while trying not to become infected themselves. It is only with everyone's help and cooperation that they can continue to treat the sick, and help us all survive this crisis.

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Remember: PPE is for health care workers. People should wear a homemade mask or face covering if they go out in public to places where social distancing is difficult. Please reserve medical masks for health care workers.