

## Do Homemade Face Masks Help?

As the COVID-19 pandemic continues all over the world and personal protective equipment (PPE) remains in short supply, people are seeking ways to protect themselves and also to support health care workers as they serve on the “front lines” of battle against this highly contagious pathogen. There are now many patterns on the internet for creating homemade cloth masks. But do masks help? What is their utility and what are their limitations? This guidance document seeks to answer some of those questions, based on a review of the scientific literature.

In order to answer these questions, we need to look at how the SARS-CoV-2 virus (which causes COVID-19 infection) is transmitted from one person to another. We still have much to learn, but there is good evidence that it is transmitted by aerosols (microscopic droplets floating in the air) and by respiratory droplets, which are produced when people cough or sneeze and are heavy enough to fall out of the air onto surfaces. If infected with SARS-CoV-2, these secretions can contaminate an infected person’s hands and nearby surfaces and can persist on certain surface materials (if left unsanitized) for over 2 weeks. Touching a contaminated surface with your hand and then touching your eyes, nose or mouth can transfer the virus to a port of entry into your body. This is the reason that frequent and effective hand hygiene is your first line of defense against infection.

But what about virus particles in the air? We all produce very tiny particles when we breathe normally, even when we are healthy or feel well. We now know that people who are infected with SARS-CoV-2 can be infectious to other people even before they develop symptoms themselves (asymptomatic or pre-symptomatic spread). This is because the pathogen replicates first in the upper respiratory tract. Research has now shown that **asymptomatic and pre-symptomatic spread play a large role in the transmission of COVID-19.**

**So will wearing a mask protect you?** That depends. N95 medical masks are manufactured to filter out such tiny particles, but they have to be fit-tested to the wearer’s face. If the fit is poor, the mask is not protective. Surgical masks do not fit the face well. They are primarily designed to protect the environment from the wearer by containing respiratory droplets and keeping them from contaminating surgical fields or sterile surfaces.

**So where do homemade cloth masks fit in?** Unfortunately, there have been very few research studies to assess this, and the available studies do little to compare the efficacy of different materials. It is clear that cloth masks are far less protective to the wearer than N95 masks and even fall short of surgical masks, though they are closer in comparison to these. But that doesn’t mean that they have no role to play in containing the COVID-19 pandemic.

### **What wearing a cloth or surgical mask will do for you (and others):**

- Keep you from touching your nose and mouth and getting infected from germs on your hands (but remember not to touch your eyes either!)
- Protect your nose and mouth from large infected respiratory droplets from other people’s cough or sneeze
- If you’re sick, it will keep you from coughing or sneezing infected respiratory droplets onto your hands or onto surfaces that others may touch later
- Even if you don’t feel sick, wearing a face covering of any type, including cloth, will reduce the number of infected aerosol particles you release into the air around you and **will help protect others if you have COVID-19 and you aren’t aware of it yet.**

**The more people wear masks in public, especially indoors and when physical distancing is not possible, the safer we ALL are from the spread of COVID-19!**

**Physical distancing, good and frequent hand washing/sanitizing and wearing face coverings are all part of our #1 line of defense against COVID-19.**

There are now many patterns for creating cloth masks on the internet. If you want to make yourself a mask, we suggest choosing a design that has several layers of fabric, and choosing fabric with a tight weave. You can find a pattern [here](#).