

## The Use of Masks in the COVID-19 Pandemic

The question of how to use face masks in the current COVID-19 pandemic has been discussed quite a lot in recent weeks. The advice of experts has gone back-and-forth, confusingly. Things are starting to be a bit clearer now. This paper is to distill the information and best guesses for your use.

First it should be said that the virus that causes COVID-19, called SARS-CoV-2, is flung from an infected person's throat into the environment by a cough, sneeze, shouting, singing, even by talking. Naturally the more droplets, the more virus and the more risk of contagion, so sneezing and coughing are the worst problems. Those droplets can get onto a hand if the infected person sneezes or coughs into it, or they can land on a surface - a countertop or a computer screen, for examples. Then comes along an uninfected person for a handshake or a hand to countertop. Those now contaminated hands can then transport virus into the entryways of the previously uninfected body: eyes, nose, mouth. Boom, or should I say squish.

So the number one and two rules to prevent you from new infection are: keep your hands very clean by washing all the time, and keep your hands away from your face.

But what about floating respiratory droplets that you might inhale? On April 3, President Trump announced in a confusingly half hearted way that people in the United States should begin wearing face coverings in public to slow the spread of the coronavirus. He went on to say that although it was "good advice," he himself would not follow it. Hmmm.

Here's the deal as I see it. Again far and away the most of new infections are caused by hands to face. There is no scientific data as to what percent of the total infections hands to face cause, or what percent are caused by inhaling infected droplets. Best guesses: 95% hands, 5% inhale. Enter the face mask question.

There is no question but what masks are terribly important in a hospital setting or in a doctors office or a dentist office. But what we are discussing is how to use masks in the community. They are most probably worth it. Not surgical masks, not N95 masks, called respirators. Those should be reserved for healthcare workers. We are talking about homemade cloth masks.

Here's what the Centers for Disease Control and Prevention recently wrote: "CDC recommends wearing cloth face coverings in public settings where other social distancing measures are difficult to maintain (e.g., grocery stores and pharmacies) especially in areas of significant community based transmission." How does that apply here?

I think wearing masks should become the new norm for us in the Glens Falls area. Wear them especially where there are other people in closed spaces like food stores, There the wind doesn't blow germs away and sunlight doesn't inactivate them. By the way, wearing a mask may remind you to keep your hands away from your face! But think of this: masks can become contaminated from infected droplets in the air or from your hands. So treat them that way: wash your hands every time you touch the mask, and wash the mask as frequently as you use it. Wash by hand in soapy hot water. Hang them to dry as they may be too fragile for a tumble dry.

There are instructions on the internet on how to make masks at home. Here's a YouTube video, for example:

<https://www.joann.com/make-to-give-response/>

And here are specific instructions to make a mask:

[https://www.washingtonpost.com/health/2020/04/05/how-sew-your-own-fabric-mask/?arc404=true&utm\\_campaign=wp\\_post\\_most&utm\\_medium=email&utm\\_source=newsletter&wpisrc=nl\\_most](https://www.washingtonpost.com/health/2020/04/05/how-sew-your-own-fabric-mask/?arc404=true&utm_campaign=wp_post_most&utm_medium=email&utm_source=newsletter&wpisrc=nl_most)

Some local women like Dana Hall (a Warren County Public Health nurse) are starting to make masks, nice looking ones of good materials. I think Joann's Fabrics in Queensbury is giving out free kits to make them. If we can gather enough masks, we can set up distribution centers - maybe the Warren County Municipal Center in Queensbury and the Courthouse in downtown Glens Falls. That way there can be no excuses! Interested in making several to contribute? Contact me at 518-926-9936

Be safe, please.

Richard P. Leach, MD  
4/6/2020

5/1/2020 Addendum

In the past month, the evidence has been accumulating that masks are more important than we had previously thought...to the point that there is now no doubt but what we should all be wearing them when not at home.

There are two lines of evidence to consider. The first: we now realize that there is much more danger of "stealth transmission" of the virus from the "asymptomatic carrier" - the person who has the infection and is contagious but has no symptoms. This kind of evidence is coming from studies of Covid-19 epidemics on cruise ships and from studies of the viral spread by asymptomatic travelers out of Wuhan, China, to Frankfurt, Germany. At this point it seems clear that my estimate in the above article that 5% of the Covid-19 cases are acquired inhaling the germ is probably way off.

The second comes from studying the control programs of Asian countries like South Korea and Taiwan: they required the universal use of masks early in their country's epidemics and they did remarkably well in shutting down the spread of Covid-19. To be sure, we don't know how big a role masks played, as they were part of a bigger program of mitigation. But those countries are very certain of their importance.

Here in the Glens Falls area, most people I see on the street or in stores are being very good about using face masks. Part of that success comes from the remarkable efforts of folks making attractive and comfortable masks at home.

Let's try to make the use of face masks even more widespread. The evidence shows that if we do, we will be rewarded with fewer infections, fewer sick folks, fewer dead neighbors. And there are some great masks out there...make them a fashion statement! By the way, masks may even help protect the allergy-prone among us from our pollen-related spring sniffles!

RPL