

Dr. Brownstein's Blog on Face Masks

We Must Wear Face Masks? Show Me the Science Behind That!

Folks, I have been writing to you about COVID for over a month. It is been a painful time period for all of us. What is really sad is that *too many political dictates are being fostered on us without any good scientific evidence to back them up*. One of those requirements that has me irritated is the use of face coverings that I see so prevalent out there. When I go to Costco, 95% of the people in the store are wearing face masks. Why is that?

The Governor of Michigan recently released an edict requiring that citizens wear a face covering when in any enclosed public space. It specifically states, "*Any individual able to medically tolerate a face covering must wear a covering over his or her nose and mouth—such as a homemade mask, scarf, bandana, or handkerchief—when in any enclosed public space.*" Later in the edict, it states, "Supplies of N95 masks and surgical masks should generally be reserved, for now, for health care professionals, first responders and other critical workers who interact with the public."

It should be well known that cloth masks, bandanas, or handkerchiefs will do very little to stop the spread of coronavirus. In fact, they may actually increase your risk of becoming ill from corona and other influenza-like illnesses. A 2015 study found cloth masks, when compared to surgical masks, increase the rate of influenza-like illnesses 13x! (1) Cloth masks are probably best avoided and should not be reused without properly sanitizing them.

Regular surgical masks are not much better in this situation. The COVID-19 virus is 0.125 μm in size. Surgical masks have been shown to not adequately filter against aerosols measuring from 0.9-3.1 μm . (2) Other researchers have shown that particles from 0.04-0.2 μm can penetrate surgical masks. (3)

A 2020 study in Seoul, South Korea looked at the effectiveness of surgical and cotton masks in blocking COVID-19 in a controlled comparison of four patients. (4) The COVID-infected patients were put in negative pressure isolated rooms. The scientists compared disposable surgical masks (3 layers) with reusable cotton masks. Patients were instructed to cough 5 times while wearing no mask, surgical mask, or cotton mask. Interestingly, all swabs from the outer masks—including surgical masks—were positive for COVID-19. Inner masks were also found to be contaminated. That means the mask did not effectively filter out the COVID virus since it is too small. The authors state, "Neither surgical nor cotton masks effectively filtered {COVID-19} during coughs by infected patients."

The study also reported greater contamination on the outer than the inner mask (both surgical and cotton) surfaces. The authors claim that the mask is either allowing the virus to cross from the inner to the outer surface because the virus is too small or the aerodynamic feature of a mask could explain this finding. A turbulent jet due to air leakage around the mask edge could contaminate the outer surface.

We have made far too many political decisions in the COVID crisis based on fear and not on reliable data. Here is a perfect example of another one: everyone must wear a mask when inside any public place.

Should you wear a mask? *If you are coughing or sick, my answer is yes. A surgical mask, and to a lesser extent a cotton mask, will block large droplets from being spread.* However, should we dictate to healthy people that they are required to wear a mask—cotton or surgical—when in any public enclosed space? Someone show me the science supporting the Executive Order by the Governor of Michigan. And Governor Whitmer wonders why so many of us are annoyed.

Addendum: A further annoyance is my lack of success in getting masks—both N95 and surgical masks—for my staff to use when we are treating COVID patients. Perhaps the Governor should release an executive order helping us get the PPE equipment we need. We have had masks, gowns and face shields on order for over two months. That is beyond annoying.

To All Our Health,
~DrB

David Brownstein, MD is a conventionally trained Board-Certified Family Physician with the additional overlay of holistic principles.

While Dr. Brownstein does not claim to have a cure for any illness, he does believe that we can enhance the individual's immune system by supporting the 'host' & the terrain of the host. The human body is well designed and the immune system, when given the proper support, can optimally function.

Disclaimer: The information on this blog should not be used as medical advice. Any therapies that are discussed should be supervised under the guidance of your physician or licensed healthcare professional.

- (1) BMJ Open. 2015;5:e006577.
- (2) Am. J Infect. Contol. 2008;36:276-282
- (3) Ann.Occup. Hyg. 2008;52:177-85
- (4) Annals of Int. Med. Letter. IBID. April 6, 2020.