

Q & A with Primary Care Physician
[Dr. Marny Eulberg, MD](#)



Question: Dr. Eulberg, I find that wearing a mask makes breathing hard. I started to faint Friday at work. Is it the carbon dioxide I am rebreathing? What other options are there?

Answer: Different masks make a difference in the control of respiratory infections (including COVID-19) in different ways. They affect the wearers ability to breathe differently as well based on the purpose and the materials the masks are made of.

The COVID-19 virus is only about 1 micron in size, which is 100 times smaller than the width of a human hair. (There is an interesting video on YouTube if you Google "[What is the size of the COVID virus?](#)"). So-o-o if the goal of the mask is keeping the virus particles that are in the air from coming through the mask material and into your nose and mouth then the openings in the fabric of the mask must be smaller than 1 micron. That means very, *very* little air can come in and out!

The challenge is finding a balance between limiting the amount of respiratory droplets that can be dispersed out into the environment by a contagious person, decreasing (if possible) the virus particles breathed in by a person wearing a mask, and breathability. At this time, we believe the primary purpose of wearing a mask is to keep the wearer from spreading germs to others—the mask can trap many of the much larger bacteria and reduce the distance that small viral particles travel when the wearer talks, coughs, or sneezes. For example, when wearing a mask an infectious person may now only spew respiratory droplets a distance of 1-2 feet instead of 6-10 feet. No mask, except those with hoses that circulate filtered air into a hood can keep the wearer from breathing in ANY viral particles.

A mask's effectiveness at serving as a filter to limit the spread of virus from an infected person is based on the materials the mask is made of and the number of layers in the mask. More layers or more dense materials increase the filtering capacity, but also decrease the ability of air to move in and out of the mask and thus the breathability. The easiest mask to breathe through is one with only two layers of a loosely woven fabric, but that also is the least protective. More effective is a mask made with four layers of material including at least one layer of a non woven material, such as that found in surgical drape material or fusible interfacing.

Question: Dr. Eulberg, probably because of all the world health issues that we are bombarded with constantly I have not been sleeping well so I decided to try Melatonin, 3mg at bed time. I have used it a few times and it does help me sleep, but the following day I feel like I'm functioning in a slight fog. I know that polio survivors have had some degree of brain involvement with the initial polio infection and I'm wondering if that is causing my foggy feeling.

Answer: Since you report the brain fog beginning after starting to take the melatonin, my first thought would be that the slight brain fog is a side-effect of the melatonin and not related to some brain involvement from your prior polio. On days that you don't take the melatonin do you have slight brain fog the next day? Or if you haven't taken the melatonin for a couple nights, how do you feel in the morning? Although melatonin is generally safe, all chemicals, even if they are safe enough to be sold over the counter can still have undesirable side effects. You also have to decide whether the benefit of sleeping well is greater than the downside of slight brain fog the next day.

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