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Will Wearing a Mask Protect You Against Coronavirus?

Analysis by Dr. Joseph Mercola Fact Checked | February 08, 2023

STORY AT-A-GLANCE

- Fear of coronavirus infection has led to a massive increase in sales of surgical face masks and respirators. Many health care facilities are now struggling to obtain the supplies needed to protect health care workers and patients
- Health experts are issuing public statements saying the masks won't protect healthy people against infection and, according to the FDA, the "immediate health risk from COVID-19 is considered low," so face masks are unwarranted for public use
- While the evidence is conflicting, some studies suggest healthy people do limit their chances of infection if wearing a face mask, especially properly fitted N95 or N100 respirators
- A 2009 study found use of face masks in households was ineffective due to low adherence, not because they don't prevent the transmission of illness. In fact, were more people to wear masks, influenza-like infection rates would probably be lower
- A 2015 meta-analysis found that in 8 of 9 trials, use of face masks in community settings prevented infection in healthy people when used in isolation or in combination with hand hygiene, when used early and consistently

From Dr. Joseph Mercola

Since COVID-19 first entered the scene, exchange of ideas has basically been outlawed. By sharing my views and those from various experts throughout the pandemic on COVID treatments and the experimental COVID jabs, I became a main target of the White House, the political establishment and the global cabal.

Propaganda and pervasive censorship have been deployed to seize control over every part of your life, including your health, finances and food supply. The major media are key players and have been instrumental in creating and fueling fear.

I am republishing this article in its original form so that you can see how the progression unfolded.

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With 101,606 reported COVID-19 cases across 96 countries and territories as of March 6, 2020,[1] and no known cure, people are seeking ways to protect themselves against infection. Logically, many are resorting to wearing face masks when venturing out in public.

However, as face masks are becoming harder to come by, health experts are issuing public statements saying the masks won't protect healthy people against infection. Is that true? Or is it a ploy to ensure an adequate supply for health care workers? As reported in a March 4, 2020, Time article:[2]

> *"'It seems kind of intuitively obvious that if you put something — whether it's a scarf or a mask — in front of your nose and mouth, that will filter out some of these viruses that are floating around out there,' says Dr. William Schaffner, professor of medicine in the division of infectious diseases at Vanderbilt University.*
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> *The only problem: that's not effective against respiratory illnesses like the flu and COVID-19. If it were, 'the CDC would have recommended it years ago,' he says. 'It doesn't, because it makes science-based recommendations.'"*

Do Masks Only Protect Health Care Workers?

According to the U.S. Centers for Disease Control and Prevention, surgical masks are not designed to provide protection against airborne pathogens and are not considered

respiratory protection. They're only designed to prevent large-particle droplets (which may contain pathogens) from reaching your mouth and nose.[3,4]

Part of the problem is that these kinds of masks won't form a seal around your face. Most people also have a tendency to touch their face a lot, thus depositing pathogens from their hands to their face anyway.

According to U.S. Surgeon General Dr. Jerome Adams, wearing a mask may actually increase your risk of infection, as most people will touch their face even more frequently when wearing one.[5] The CDC only recommends surgical masks for:

- People who are symptomatic, as the mask will inhibit the spread of the virus if you cough or sneeze into the mask
- Caregivers for infected patients

Mayo Clinic infectious diseases specialist Dr. Nipunie Rajapakse explains:[6]

> *"The current recommendations regarding masks are that if you yourself are sick with fever and cough, you can wear a surgical mask to prevent transmission to other people.*
>
> *If you are healthy, there is not thought to be any additional benefit to wearing a mask yourself because the mask is not airtight and does not necessarily prevent breathing in of these viral particles, which are very tiny."*

What About N95 Respirators?

The CDC also does not recommend that the general public wear N95 respirators, which are designed to be tight-fitting and capable of filtering out at least 95% of much smaller (0.3 micron in size) airborne particles. According to the U.S. Food and Drug Administration:[7]

> *"For the general American public, there is no added health benefit to wear a respiratory protective device (such as an N95 respirator), and the immediate*

health risk from COVID-19 is considered low."

You wouldn't think the health risk from COVID-19 was "considered low" by looking at or listening to the news though. Perhaps journalists didn't get the memo?

Either way, it strikes many as odd that facemasks and N95 respirators are universally considered key instruments for infection control in health care settings, yet the general public is now told they won't protect against respiratory diseases such as COVID-19.

The Respirator Fit Test

One reason cited for why the public should not use N95 respirator masks either, even though they protect against airborne pathogens, is because they require fit testing to ensure a tight seal around the face.[8]

However, according to the CDC's fit test Q & A document,[9] this is a relatively simple affair. The qualitative pass/fail test that an individual would conduct to assess whether the mask is properly fitted is a smell test. If you can smell an odorous substance through the mask, it's not tight-fitting enough.

What's more, this test only needs to be done once, when selecting the best-fitting brand, make, model and size of the respirator. Once you know which model fits your face best, you don't need to do the fit test again until or unless your facial structure changes due to dental or cosmetic surgery, for example, or "an obvious change in body weight." Health care workers, however, must do the fit test once a year regardless, in order to maintain NIOSH compliance.

What Does the Research Say?

So, what's the real deal on the use of face masks? Do they only protect health care workers from getting sick, and sick patients from spreading it to others, or might they prevent healthy lay people from being infected as well? A 2009 study[10] in Emerging

Infectious Diseases sought to answer this question in the wake of the bird flu (H5N1) outbreak. According to the authors:[11]

> *"Many countries are stockpiling face masks ... to reduce viral transmission during an influenza pandemic. We conducted a prospective cluster-randomized trial comparing surgical masks, non–fit-tested P2 masks, and no masks in prevention of influenza-like illness (ILI) in households.*
>
> *During the 2006 and 2007 winter seasons, 286 exposed adults from 143 households who had been exposed to a child with clinical respiratory illness were recruited ... Adherence to mask use was associated with a significantly reduced risk of ILI-associated infection.*
>
> *We concluded that household use of masks is associated with low adherence and is ineffective in controlling seasonal ILI. If adherence were greater, mask use might reduce transmission during a severe influenza pandemic."*

In other words, mask use was ineffective due to low adherence, not because they don't prevent the transmission of illness. In fact, were more people to wear masks, infection rates would probably be lower.

Face Masks 'Underappreciated' for Infectious Control

Then there's the article[12] "Disrupting the Transmission of Influenza A: Face Masks and Ultraviolet Light as Control Measures," published in Health Policy and Ethics in 2007, which states:

> *"In the event of an influenza pandemic, where effective vaccine and antiviral drugs may be lacking, disrupting environmental transmission of the influenza virus will be the only viable strategy to protect the public. We discuss two such modalities, respirators (face masks) and ultraviolet (UV) light.*
>
> *Largely overlooked, the potential utility of each is underappreciated. The effectiveness of disposable face masks may be increased by sealing the edges*

of the mask to the face. Reusable masks should be stockpiled, because the supply of disposable masks will likely prove inadequate ...

Respirators (N–95 and N–100; both commercially available) are masks designed to shield the wearer from inhalational hazards, as opposed to surgical masks, which are designed to protect others from contaminants generated by the wearer. In the discussion that follows, use of the word mask refers only to the former ...

Current respirator filters are typically made of polypropylene wool felt, or fiberglass paper. Particles collide with and become enmeshed within these nonwoven fibers. Another mechanism for the filtering media may be the electrostatic charge that these fibers have, which attract and hold oppositely charged particles. The influenza virus has charges at its hemagglutinin spikes ...

N95 respirators ... have been reported to be protective in preventing transmission of the severe acute respiratory syndrome (SARS) virus ... but use of these masks failed to prevent a cluster of cases in one hospital.

If one assumes that influenza is transmitted by respiratory droplets (... which immediately fall to the ground) rather than by aerosols (... which remain suspended in air for long periods of time), the supposition may be that keeping a safe distance may obviate the need for a face mask.

It is stated that the range of such droplets is generally no more than 3 ft. We are unable to locate the basic science behind that assertion ... Laschtschenko found that talking sprayed viable bacteria 6 m (approximately 20ft).

Koeniger ... found that even whispering sprayed bacteria ... 7.4 m (approximately 24 ft) and a mixture of coughing, speaking, and sneezing carried bacteria 12.4 m (40 ft) ... From these very old reports, the distinction between respiratory droplets and aerosols may be more apparent than real.

> *As a respiratory droplet falls to the ground, the aqueous portion quickly evaporates, but the bacterial or viral portion remains. Theoretically, a viral particle, if it remains viable, could be carried by wind or reaerosolized by ground disturbances."*

The paper does highlight several factors that can render respirator masks unreliable and ineffective. There's the issue of fit and seal against the face, the fact that they cannot be repeatedly reused, the risk of contact contamination when touching or removing the mask, and the fact that your eyes are also a portal for viral infection.

Still, N95 and N100 respirators "offer the potential of mitigating a potentially uncontrollable pandemic," the authors note, adding "It is our hope that this brief review ... draws the attention of policymakers to allow for wider implementation of their use as public health measures."

Mask Use May Not Be Effective in Isolation

All of that said, studies[13,14] looking at disease transmission rates among people who use either face masks or N95 respirators have shown conflicting results. Some conclude they lower the risk of infection while others find they're no more effective than handwashing. The following excerpt from a systematic review published in 2012 is a case in point:[15]

> *"There are limited data on the use of masks and respirators to reduce transmission of influenza ... Inclusion criteria included randomized controlled trials and quasi-experimental and observational studies of humans ... with an outcome of laboratory-confirmed or clinically-diagnosed influenza and other viral respiratory infections.*
>
> *There were 17 eligible studies. Six of eight randomized controlled trials found no significant differences between control and intervention groups (masks with or without hand hygiene; N95/P2 respirators).*

One household trial found that mask wearing coupled with hand sanitizer use reduced secondary transmission of upper respiratory infection/influenza-like illness/laboratory-confirmed influenza ...

One hospital-based trial found a lower rate of clinical respiratory illness associated with non-fit-tested N95 respirator use compared with medical masks.

Eight of nine retrospective observational studies found that mask and/or respirator use was independently associated with a reduced risk of severe acute respiratory syndrome (SARS) ...

None of the studies established a conclusive relationship between mask/respirator use and protection against influenza infection. Some evidence suggests that mask use is best undertaken as part of a package of personal protection especially hand hygiene. The effectiveness of masks and respirators is likely linked to early, consistent and correct usage."

A 2015 systematic review came to similar conclusions, stating:[16]

"The concepts of droplet and airborne transmission that are entrenched in clinical practice have recently been shown to be more complex than previously thought.

Several randomized clinical trials of facemasks have been conducted in community and healthcare settings, using widely varying interventions, including mixed interventions (such as masks and handwashing), and diverse outcomes.

Of the nine trials of facemasks identified in community settings, in all but one, facemasks were used for respiratory protection of well people. They found that facemasks and facemasks plus hand hygiene may prevent infection in community settings, subject to early use and compliance."

Recommended Infection Prevention Strategies

At present, health authorities recommend using the following strategies to minimize the spread of infection:[17]

- Frequently wash your hands with soap and water for at least 20 seconds
- Avoid touching your eyes, nose and mouth
- If you need to cough, cough into your flexed elbow or disposable tissue. Discard the tissue in a trash can and wash your hands
- If feeling unwell, stay home and avoid public spaces

If you have symptoms of illness such as coughing or sneezing, be sure to wear a surgical mask to contain the spread whenever you're around others. As for whether or not you should wear a mask to prevent contracting COVID-19 (or some other infectious disease), the answer is a bit more elusive.

Based on the published evidence, however, it appears it can be at least moderately helpful provided you're:

- Consistent in its use
- Using an N95 or N100 respirator mask and putting it on correctly to ensure a proper seal
- Not touching the mask while wearing it (if droplets have landed on the mask, the viruses in the droplets are still infectious and can transfer to your hands. So, if you touch the mask, you need to wash your hands)
- Removing it correctly (for the same reason as above)
- Using it concomitant with frequent handwashing and other basic hygiene recommendations

Global Shortage of Face Masks

As reported by The Washington Post,[18] face masks of all kinds are now in such short supply, even hospitals are having a hard time getting enough. Mike Bowen, executive vice president of Prestige Ameritech, the largest U.S.-based manufacturer of surgical masks, claims he's been warning governments about the coming of this day.

> *"This is the precise scenario he began warning about almost 15 years ago, when he pleaded with federal agencies and lawmakers to boost U.S. production of medical masks,"* The Washington Post writes.[19]
>
> *"He had predicted an eventual health scare and not enough manufacturers. He was right ... 'What I've been saying since 2007 is, 'guys, I'm warning you, here's what is going to happen, let's prepare,' Bowen said ... 'Because if you call me after it starts, I can't help everybody.'*
>
> *The coronavirus outbreak has ... exposed major vulnerabilities in the medical supply chain. Many U.S. companies, especially hospitals and pharmaceutical firms, rely on Chinese manufacturers for products ... like masks and gloves. Now, much appears upended.*
>
> *There is no global, centralized plan for fast-tracking production of what's known as personal protective equipment ... 'Prestige Ameritech is presently the lone voice warning of the insecure U.S. mask supply,' Bowen wrote to President Barack Obama in June 2010 ...*
>
> *'The U.S. protective mask supply could — and mostly likely would — be disrupted, confiscated or diverted in the event of a pandemic,' Bowen wrote to President Trump three years ago ... 'A lack of planning on their part is not an emergency on my part,' Bowen said. 'They had their chance. I told them over and over.'"*

Still Many Unknowns Surrounding COVID-19

There's still an awful lot we don't know about COVID-19, its origin, infection mechanisms, incubation and transmission rates, and its treatment. At present, the

incubation period appears to be somewhere between two and 14 days, which isn't exactly a precise measurement.[20]

Complicating matters is the finding that you can spread the virus during that incubation period, and may remain contagious for an undetermined time even after you've recovered. January 30, 2020, German doctors reported[21] a case of transmission from an asymptomatic carrier, saying:

> *"... it is notable that the infection appears to have been transmitted during the incubation period of the index patient, in whom the illness was brief and nonspecific. The fact that asymptomatic persons are potential sources of 2019-nCoV infection may warrant a reassessment of transmission dynamics of the current outbreak.*
>
> *In this context, the detection of 2019-nCoV and a high sputum viral load in a convalescent patient (Patient 1) arouse concern about prolonged shedding of 2019-nCoV after recovery."*

As for how it spreads, the virus can pass from one person to another through respiratory droplets emitted when talking, coughing or sneezing. Aside from breathing the virus in, you may be infected by touching a contaminated surface, or when shaking hands or sharing a drink or utensils with an infected person[22] — whether asymptomatic or symptomatic, and possibly for some days after they've recovered.

Now, if COVID-19 can spread during the incubation period and for some time after recovery, wearing a face mask as a precautionary strategy may be rather sensible. After all, surgical masks are meant to limit the spread of the virus.

If you don't know whether you've been exposed, you won't know if you're contagious. So, limiting the wearing of face masks to people who are already symptomatic means people will be walking around spreading the disease for up to two weeks. If they're wearing a mask, they limit the spread of the contagion.

While not a short-term solution for the current shortage of protective masks, perhaps it would be wise to increase global production in preparation for these kinds of outbreaks, just like Bowen has suggested for the past 15 years.

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