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MISSOURI CENTER FOR PUBLIC HEALTH EXCELLENCE

Public Health
Prevent. Promote. Protect.

# Face Masks as a Critical Tool to Slow the Spread of Covid-19

**Situation and Background**

Public health experts in Missouri and across the country have been monitoring the global pandemic of COVID-19, the illness caused by **SARS-CoV-2. Because this coronavirus is so new, evidence regarding transmission, mitigation, and treatment is r**apidly evolving.

The virus is thought to be transmitted from person to person primarily when respiratory droplets from an infected person coughing, sneezing, or talking land in the nose or mouth of another person. It is also possible but likely less common that the virus spreads via aerosolized microdroplets and contaminated surfaces (World Health Organization, July 2020).

Given the large impact the virus is having around the globe and increasing incidence in the United States, identifying effective methods of prevention and mitigation is critical. Emerging evidence that transmission can occur even when an individual is not showing symptoms (is asymptomatic or pre-symptomatic) means that more aggressive measures must be put in place to keep communities safe (Furukawa NW, 2020).

**Evidence**

Face masks reduce disease spread by decreasing the likelihood that infectious respiratory droplets from persons with COVID-19 travel into the air and infect uninfected people.

A meta-analysis of 172 observational studies from 16 countries across six continents concluded that face masks reduce the risk of transmitting respiratory viruses such as SARS-CoV-2 (Derek K Chu, 2020)**.** A similar review of 19 randomized control trials also found that face masks are efficacious for preventing the spread of respiratory diseases. According to that review, while healthcare workers likely need the protection of a respirator, the general public can benefit from wearing non-respirator masks (MacIntyre, 2020). Masks are most effective when used in conjunction with other preventive measures such as good hand hygiene. They are especially important in the case of a disease like COVID-19, which can spread from person to person even if an infected individual is not showing symptoms (Furukawa NW, 2020).

At a population level, modeling suggests that widespread face mask use can play a big part in preventing the spread of the virus. If almost all people wear masks and they wear them consistently even if they do not have symptoms, the effective reproduction number (*Re*, the average number of infections generated in the population by one infectious person) may be decreased to below one, signifying the end of epidemic spread (Stutt Richard O. J. H., 2020).

Research from Goldman Sachs suggests a national mask mandate would slow the growth rate of new coronavirus infections and prevent a 5% GDP loss caused by additional lockdown measures. The researchers estimate that a national mandate would increase the portion of people wearing masks by 15 percentage points, and cut the daily growth of new cases by 1.0 percentage point to 0.6%. Reducing the

spread of the virus through mask-wearing, the analysts found, could be a substitute for strict lockdown measures that would otherwise shave 5%—or $1 trillion—off the U.S. GDP. (Hansen Sara, 2020)

**Recommendation**

MOCPHE recommends the use of face masks by the general public when outside the home and supports face mask requirements due to substantial evidence that they decrease the risk of transmission of SARS-CoV-2, the virus that causes COVID-19. Face masks will continue to be a critical tool to fight this virus as evidence grows that COVID-19 is spread by asymptomatic and pre-symptomatic individuals and face-to-face interactions increase.

**Addressing Common Concerns**

***At first, experts said we didn't have to wear masks, but now they're saying we do. What's going on?***

- You're right that public health experts did not initially advise the general public to wear masks.
- This virus is new; it was first identified in December 2019. Since then, public health experts, researchers, and medical professionals have been collecting information about the virus to understand how it behaves and what we can do to keep ourselves and our communities safe.
- When this new coronavirus was identified, scientists thought it was likely that it behaved like other coronaviruses, which typically do not spread without a person showing symptoms. At that point, it made sense to focus on making sure that healthcare workers had enough masks since they were the ones directly caring for sick people with symptoms.
- As time went on and more information was gathered, it became clear that infected people *without* symptoms could spread SARS-CoV-2, the coronavirus that causes COVID-19.
- When scientists collected enough evidence to know that people without symptoms can spread the disease and that simple cloth masks can help prevent this, recommendations were changed.
- Even though it can be frustrating and confusing when recommendations change, this is actually a good sign. It means that policymakers are paying attention to how the scientific understanding of the virus is growing and are constantly checking to make sure that policies reflect the most up-to-date scientific knowledge.

***I'm not sick, so why do I have to wear a mask?***

- We now know that people who are not showing symptoms of COVID-19 can give the virus to other people. That means that even if you are feeling completely healthy, you could be infected and get someone else sick without knowing it. For that reason, it is important for everyone who can safely wear a mask to wear one when in public.

***I've heard rumors that wearing a mask is dangerous. Is that true?***

- For most people, wearing a face mask is not dangerous at all. Many healthcare workers wear masks all day every day at work, and they do not cause problems. Face masks are designed to ensure that you're able to breathe normally.
- While the vast majority of people can safely wear masks, they should not be worn by children under the age of two, people who have conditions that make it hard to breathe, or anyone who is unconscious or otherwise unable to remove their own mask.

- There are some circumstances where wearing a mask is not feasible, such as swimming or operating heavy machinery that may get caught on the mask.
- Cloth face coverings are an important preventive measure and are most needed when social distancing is difficult. If cloth face coverings cannot be used, make sure to take other measures to reduce the risk of COVID-19 spread, including social distancing, frequent hand washing, and disinfecting frequently touched surfaces.
- There is no evidence that wearing a mask causes immunity problems or causes illness.

***It's not fair for the government to tell me what to do, so I'm not going to wear a mask.***

- Each of us has freedom within reason to do what we want to do as long as our actions don't hurt other people. When actions we would otherwise have a right to do put other people at risk, limitations are needed to protect other people. This is the reason some jurisdictions have chosen to require people wear masks. In those jurisdictions, you can't go in public without a mask the same way you can't drive a car while intoxicated or construct a building without following safety codes. The government has an obligation to look out for all citizens and ensure that risks are minimized.
- Wearing a mask might be inconvenient or slightly uncomfortable, but this small behavior enables us to go about many activities in our lives without putting ourselves or others at high risk of getting COVID-19.

For more information, view the CDC's website: https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/diy-cloth-face-coverings.html

**Works Cited**


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