

Why are masks important?

Masks act as barriers and can prevent respiratory droplets containing viral particles from entering the body. They can also prevent infected people with no symptoms or mild symptoms from unknowingly spreading COVID-19 through coughs or sneezes. While homemade masks are not as effective as surgical or N95 masks, the general consensus is that they are better than nothing at all. Even limiting matter that you can come in contact with can lower the severity of the infection.

Sources:

- van der Sande, M., Teunis, P., & Sabel, R. (2008). Professional and Home-Made Face Masks Reduce Exposure to Respiratory Infections among the General Population. PLoS ONE, 3(7), e2618. <https://doi.org/10.1371/journal.pone.0002618>
 - “Any type of general mask use is likely to decrease viral exposure and infection risk on a population level, in spite of imperfect fit and imperfect adherence”
- Would everyone wearing face masks help us slow the pandemic. (2020, March 28). Would everyone wearing face masks help us slow the pandemic? Science | AAAS. <https://www.sciencemag.org/news/2020/03/would-everyone-wearing-face-masks-help-us-slow-pandemic>
 - “A key factor pushing health authorities to discourage mask-wearing is the limited supply, says Elaine Shuo Feng, an epidemiologist and statistician at the University of Oxford”
- Feng, S., Shen, C., Xia, N., Song, W., Fan, M., & Cowling, B. J. (2020). Rational use of face masks in the COVID-19 pandemic. The Lancet Respiratory Medicine. [https://doi.org/10.1016/s2213-2600\(20\)30134-x](https://doi.org/10.1016/s2213-2600(20)30134-x)
 - “However, there is an essential distinction between absence of evidence and evidence of absence. Evidence that face masks can provide effective protection against respiratory infections in the community is scarce, as acknowledged in recommendations from the UK and Germany.^{7, 8} However, face masks are widely used by medical workers as part of droplet precautions when caring for patients with respiratory infections. It would be reasonable to suggest vulnerable individuals avoid crowded areas and use surgical face masks rationally when exposed to high-risk areas. **As evidence suggests COVID-19 could be transmitted before symptom onset, community transmission might be reduced if everyone, including people who have been infected but are asymptomatic and contagious, wear face masks.**”
 - “Perhaps it would also be rational to recommend that people in quarantine wear face masks if they need to leave home for any reason, to prevent potential asymptomatic or presymptomatic transmission. In addition, vulnerable populations, such as older adults and those with underlying medical conditions, should wear face masks if available. Universal use of face masks could be considered if supplies permit”

What does the CDC say about masks?

In general, the CDC encourages people to not wear masks unless they are healthcare workers or caring for someone with COVID-19. However, this recommendation is

largely influenced by the shortage of masks (and other protective equipment). If you have surgical or N95 masks, please strongly consider donating them to healthcare workers.

Sources:

- CDC. (2020, March 20). How to Protect Yourself. Centers for Disease Control and Prevention. https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fprepare%2Fprevention.html
 - *In settings where facemasks are not available, [healthcare providers] HCP might use homemade masks (e.g., bandana, scarf) for care of patients with COVID-19 as a last resort. However, homemade masks are not considered PPE, since their capability to protect HCP is unknown. Caution should be exercised when considering this option. Homemade masks should ideally be used in combination with a face shield that covers the entire front (that extends to the chin or below) and sides of the face."*
- U.S. Occupational Safety and Health Administration (OSHA) guidelines: *OSHA Fact Sheet: Respiratory Infection Control: Respirators Versus Surgical Masks | Occupational Safety and Health Administration*. (2020). Osha.Gov. <https://www.osha.gov/Publications/respirators-vs-surgicalmasks-factsheet.html>

What are the limitations of these masks?

These masks are generally not as effective as surgical or N95 masks. Therefore, wearing a homemade mask, while conferring some protection, does not guarantee immunity to COVID-19. **Be cautious and follow social distancing guidelines even while wearing a mask.** Additionally, effectiveness may vary based on how carefully the mask is made.

Sources

- Davies, A., Thompson, K.-A., Giri, K., Kafatos, G., Walker, J., & Bennett, A. (2013). Testing the Efficacy of Homemade Masks: Would They Protect in an Influenza Pandemic? *Disaster Medicine and Public Health Preparedness*, 7(4), 413–418. <https://doi.org/10.1017/dmp.2013.4>
- Simple Respiratory Protection—Evaluation of the Filtration Performance of Cloth Masks and Common Fabric Materials Against 20–1000 nm Size Particles. (2010). *The Annals of Occupational Hygiene*. <https://doi.org/10.1093/annhyg/meq044>

How do we decide which mask is best for you?

Based on your choices for breathability vs effectiveness, as well as other categorical variables on the quizzes, we algorithmically find the best possible masks and adhesives according to research done by the following sources.

Primary Source:

- Davies, A., Thompson, K.-A., Giri, K., Kafatos, G., Walker, J., & Bennett, A. (2013). Testing the Efficacy of Homemade Masks: Would They Protect in an Influenza Pandemic? *Disaster Medicine and Public Health Preparedness*, 7(4), 413–418. <https://doi.org/10.1017/dmp.2013.4>

Why is it important to clean your mask?

Virus particles can become trapped in your mask when you wear it outside during the day. If the mask is worn repeatedly without proper sanitation, the particles could build up, and you could be at higher risk of contracting COVID-19 by breathing these particles back in.

How can I clean my mask?

Each mask material and adhesive demands a different cleaning procedure. Please take care to read the procedure for each one. In general, most masks can be sterilized by being put in boiling water for 10 minutes. Some can be machine washed.

Sources:

- Paddy Robertson. (2020, March 8). *What Are The Best Materials for Making DIY Masks?* - Smart Air Filters. Smart Air Filters. https://smartairfilters.com/en/blog/best-materials-make-diy-face-mask-virus/?fbclid=IwAR2Uk2KAMCdx5QJAKyvj1q4oK6ym_9AZee2oi3bssEaihYt8dvJd_sShlvc
- Paddy Robertson. (2020, March 8). *What Are The Best Materials for Making DIY Masks?* - Smart Air Filters. Smart Air Filters. https://smartairfilters.com/en/blog/best-materials-make-diy-face-mask-virus/?fbclid=IwAR2Uk2KAMCdx5QJAKyvj1q4oK6ym_9AZee2oi3bssEaihYt8dvJd_sShlvc