

**A new Research Study:** "[Effect of Face Masks on Gas Exchange in Healthy Persons and Patients with COPD](#)" published Oct. 2, 2020, provides a plain language description of how masks are safe. The NBC-Today Show article further simplifies and broadens public awareness of a journal article that otherwise few would read. [see p. 2]

## Masks do not restrict oxygen flow or cause CO2 buildup, study finds

<https://www.msn.com/en-us/health/wellness/masks-do-not-restrict-oxygen-flow-or-cause-co2-buildup-study-finds/ar-BB19DTVv>

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NBC



Contrary to viral claims, wearing surgical masks or cloth face coverings does not restrict the amount of oxygen a person breathes in, nor does it cause a dangerous buildup of carbon dioxide, according to a study published Friday in the journal [Annals of the American Thoracic Society](#).

The study, though small, should help to further ease fears that masks are somehow physically harmful when, indeed, experts say mask use is by far one of the most effective ways to curb the spread of the coronavirus.

The study of masks' impact on lung function was inspired, researchers said, by a group of West Palm Beach, Florida, residents who expressed anger at a commissioners meeting in late June when local leaders ultimately voted to mandate masks. Some residents argued against the order, suggesting that wearing masks could lead people to inhale too much carbon dioxide. At least one other resident said without evidence that masks were "literally killing people."



Dr. Michael Campos, a pulmonologist affiliated with the Miami VA Medical Center and the University of Miami Hospital and Clinics, was watching the meeting on television and decided to do a study to determine whether masks have an impact on breathing. Campos and colleagues tested the effects of wearing a typical surgical mask on the body's ability to take in oxygen and exhale carbon dioxide.

Fifteen study participants were military veterans with severe chronic obstructive pulmonary disease, or COPD. Their lung function was below 50 percent. The volunteers were then compared with 15 other people who served as healthy controls.

All participants wore masks for about 30 minutes and then walked for 6 minutes, still wearing the face coverings. Using standard blood tests, researchers found no differences in levels of oxygen or carbon dioxide circulating in any of the participants' systems.

In fact, experts say, people with [underlying breathing problems](#) like COPD may be best served by wearing masks. "If you have a respiratory disease, you're at a much higher risk of contracting an infection, whether it's COVID-19 or the [flu](#) or any other respiratory problems," said Dr. Farrah Kheradmand, a pulmonologist and professor of medicine at Baylor College of Medicine in Houston, who was not involved with the research.

The study included basic surgical masks that are now widely available. It did not study [N95 masks](#), which are recommended for health care workers. Citing growing evidence that people can spread the coronavirus even if they [do not have symptoms](#), the study authors wrote that "universal mask use needs to be vigorously enforced in community settings, particularly now that we are facing a pandemic with minimal proven therapeutic interventions." "We believe our data will help mitigate fears about the health risks of surgical mask use and improve public confidence for more widespread

acceptance and use."

This story originally appeared on [NBCNews.com](https://www.nbcnews.com).



## Effect of Face Masks on Gas Exchange in Healthy Persons and Patients with COPD

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### Intro and Excerpts:

"Current evidence, from observational studies to systematic reviews and epidemiologic modeling, supports the use of masks by the public, especially surgical masks, on mitigating COVID-19 transmission and deaths.1-5 However, public mask use has been heavily politicized with inconsistent recommendations by authorities leading to divided public opinion.

Objective: To evaluate whether gas exchange abnormalities occur with the use of surgical masks in subjects with and without lung function impairment.

We acknowledge that our observations may be limited by sample size, however our population offers a clear signal on the nil effect of surgical masks on relevant physiological changes in gas exchange under routine circumstances (prolonged rest, brief walking).

It is important to inform the public that the discomfort associated with mask use should not lead to unsubstantiated safety concerns as this may attenuate the application of a practice proven to improve public health. As growing evidence indicates that asymptomatic individuals can fuel the spread of COVID-19,12 universal mask use needs to be vigorously enforced in community settings, particularly now that we are facing a pandemic with minimal proven therapeutic interventions. We believe our data will help mitigate fears about the health risks of surgical mask use and improve public confidence for more widespread acceptance and use."

*Related: [Experts answer key questions about how to clean and store coronavirus face masks.](#)*

*[Do you really need to wear a mask at home? Infectious disease experts say yes, in these two scenarios.](#)*

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<sup>1</sup> Research summary/excerpts compiled and posted by Richard Cauchi - Colorado Ideas 2.0. LLC. Underlined text in black is added for emphasis relevant to setting public policy and public education. Content is for general information and does not reflect legal or medical advice, nor endorsement or attribution to any public or government agency.