Written by **Dennis Behreandt** on September 12, 2020

The CDC Admission: Mask Effectiveness up in Flames

The Centers for Disease Control continues to take pains to remind Americans to wear their masks when they are out in public.

A missive from CDC that encouraged COVID safety during the Labor Day holiday says: "Do your part to help slow the spread of COVID-19 this Labor Day weekend. If you go to a park, beach, event or gathering, be sure to" do several things, including: "Wear a mask to protect yourself and others."

On its website, the CDC offers guidance on mask selection. Masks should "have two or more layers of washable, breathable fabric," they proclaim.

Such a mask, the CDC suggests, will filter the SARS-CoV-2 virus, which causes COVID-19, from the air we breath.

Will it?

The size of the virus based on electron micrographs show that the virus varies from 60 to 140 nanometers in diameter (.06 to .14 microns). N95 filters provide filtration down to .3 microns. On this basis alone, they should not be relied on for protection from small virus particles such as those of SARS-CoV-2.

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Still, the mainstream media and the the organs of the state insist that even mere cloth masks work for protection from the COVID virus, suggesting that the much better N95 must be nearly foolproof. *USA Today* published a "Fact Check" that insists that N95 filters work effectively for COVID 19 regardless of the fact that virus particles are small enough to pass through.

"The COVID-19 particle is indeed around 0.1 microns in size, but it is always bonded to something larger," *USA Today* says.

According to the paper, "The virus attaches to water droplets or aerosols (i.e. really small droplets) that are generated by breathing, talking, coughing, etc. These consist of water, mucus protein and other biological material and are all larger than 1 micron."

These are caught up by the mask. "Breathing and talking generate particles around 1 micron in size, which will be collected by N95 respirator filters with very high efficiency," Lisa Brosseau, a retired professor of environmental and occupational health sciences, told the paper.

Moreover, the paper insists, .3 micron limit on filtration from N95 masks is meaningless, because such masks actually filter even smaller particles. And, they filter the even smaller particles better than they filter out the large particles.

"The N95 filter indeed is physically around the 0.3 micron size," *USA Today* continues. But that doesn't mean it can only stop particles larger than that. The masks are actually best for particles either larger or smaller than that 0.3 micron threshold."

How does this official narrative on N95 masks hold up to scientific findings on the matter?

A team of researchers affiliated with the Center for Health-Related Aerosol Studies, Department of Environmental Health, at the University of Cincinnati looked into this matter in a study published in the *American Journal of Infection Control* in 2006.

Here is the abstract of their paper, in total:

> Background: Respiratory protection devices are used to protect the wearers from inhaling particles suspended in the air. Filtering face piece respirators are usually tested utilizing nonbiologic particles, whereas their use often aims at reducing exposure to biologic aerosols, including infectious agents such as viruses and bacteria.
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> Methods: The performance of 2 types of N95 half-mask, filtering face piece respirators and 2 types of surgical masks were determined. The collection efficiency of these respiratory protection devices was investigated using MS2 virus (a nonharmful simulant of several pathogens). The virions were detected in the particle size range of 10 to 80 nm.
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> Results: The results indicate that the penetration of virions through the National Institute for Occupational Safety and Health (NIOSH)-certified N95 respirators can exceed an expected level of 5%. As anticipated, the tested surgical masks showed a much higher particle penetration because they are known to be less efficient than the N95 respirators. The 2 surgical masks, which originated from the same manufacturer, showed tremendously different penetration levels of the MS2 virions: 20.5% and 84.5%, respectively, at an inhalation flow rate of 85 L/min.
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> Conclusion: The N95 filtering face piece respirators may not provide the expected protection level against small virions. Some surgical masks may let a significant fraction of airborne viruses penetrate through their filters, providing very low protection against aerosolized infectious agents in the size range of 10 to 80 nm. It should be noted that the surgical masks are primarily designed to protect the environment from the wearer, whereas the respirators are supposed to protect the wearer from the environment.

Worn properly, N95 masks reduce exposure to particulate contamination, but perhaps not to the degree most people believe. Moreover, the "worn properly" proviso must be emphasized. An inexperienced user, or a careless user, can easily negate any benefit of the mask by contaminating themselves with it while removing the mask.

A more recent study published in the *Journal of Paediatrics and Child Health* further elaborated on the efficacy of masks. "A meta-analysis of randomised controlled trials of pre-COVID-19 showed that surgical masks or N95 respirators reduced clinical respiratory illness in health-care workers by 41% and influenza-like illness by 66%: they work but are far from perfect," this study found. Additionally, the study, published in June 2020, warned about the dangers of improper use of masks.

"Surgical facemasks are designed to be discarded after single use," the researchers wrote. "As they become moist they become porous and no longer protect. Indeed, experiments have shown that surgical and cotton masks do not trap the SARS-CoV-2 (COVID-19) virus, which can be detected on the outer surface of the masks for up to 7 days. Thus, a pre-symptomatic or mildly infected person wearing a facemask for hours without changing it and without washing hands every time they touched the mask could paradoxically increase the risk of infecting others."

Moreover, the health impact of wearing the N95 mask must not be discounted. A study published in the

Journal of the Formosan Medical Association (*JFMA*), a journal published in Taipei that has been in continual publication since 1902, looked at the impact of wearing N95 masks on physiology.

The study reported these results:

> Thirty nine patients (23 men; mean age, 57.2 years) were recruited for participation in the study. Seventy percent of the patients showed a reduction in partial pressure of oxygen (PaO2), and 19% developed various degrees of hypoxemia. Wearing an N95 mask significantly reduced the PaO2 level (101.7 +/- 12.6 to 92.7 +/- 15.8 mm Hg, p = 0.006), increased the respiratory rate (16.8 +/- 2.8 to 18.8 +/- 2.7/min, p < 0.001), and increased the occurrence of chest discomfort (3 to 11 patients, p = 0.014) and respiratory distress (1 to 17 patients, p < 0.001). Baseline PaO2 level was the only significant predictor of the magnitude of PaO2 reduction (p < 0.001).

From this, the researchers reached the following conclusion:

"Wearing an N95 mask for 4 hours during HD [hemodialysis] significantly reduced PaO2 and increased respiratory adverse effects in ESRD [end-stage renal disease] patients."

Granted, the participants in this study were very ill. But the results underscore the fact that universal mask wearing can be dangerous for some, and possibly for many, people.

Most of the relevant results from the studies cited above are related to the N95 mask, currently the best mask for protection from viruses. The various types of cloth masks now regularly recommended and frequently used perform much worse.

Now, even the CDC itself has admitted that wearing cloth masks of the type it recommends for COVID are not effective for small particles. On August 30, the CDC posted a warning on this point to Facebook related to smoke.

"Cloth masks that are used to slow the spread of COVID-19 offer little protection against wildfire smoke," the CDC said. "They do not catch small particles found in wildfire smoke that can harm your health."

Writing for *RedState*, Scott Hounsell makes several good points about this CDC admission:

"Remember that 'science' that they always like to throw in the face of conservatives?" Hounsel writes. "Let's take a quick look at this info through the lens of actual science. They just told us that smoke particulates are too small to be stopped by a cloth mask. While N95 masks will protect up to 95% of particles, down to .1 microns in size. A quick Google search will tell us that smoke particles and debris are usually .4 to .7 microns in size. According to the CDC, cloth masks are not effective in stopping materials that size."

Hounsel continues:

> Another quick Google search will tell us that the Wuhan Virus is .12 microns in size, about a quarter in size of the smoke and fire debris particulate. Even if we factor for the "respiratory droplets" that are allegedly to blame for the spread of coronavirus, those droplets are as small as .5 microns, or as small or smaller than smoke and fire debris particulate. These factors and figures aren't hidden in some CDC vault that only their scientists are capable of accessing. Yet another quick Google search will show these figures within seconds.
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> The CDC cannot, on one hand, demand we wear masks because of the prevention of the spread of a disease (or droplets containing the disease) and then tell us that those same masks are ineffective

in stopping particles that are bigger than the disease we are trying to prevent.

In the end, people who wish to wear masks of whatever type should feel free to do so. But mandates as favored by Democrat and RINO politicians are inappropriate and ineffective, as the CDC is now more or less admitting.

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