

Excerpts from Studies Involving Mask-Wearing

- Study on CDC website which reviewed ten different randomized clinical trials, world-wide, reviewing highly infectious respiratory virus transmission which found “no significant reduction” in “transmission with the use of face masks.”

https://wwwnc.cdc.gov/eid/article/26/5/19-0994_article. *Nonpharmaceutical Measures for Pandemic Influenza in Nonhealthcare Settings—Personal Protective and Environmental Measures*, Jingyi Xiao¹, Eunice Y. C. Shiu¹, Huizhi Gao, Jessica Y. Wong, Min W. Fong, Sukhyun Ryu, and Benjamin J. Cowling (Volume 26, Number 5, May of 2020).

- World Health Organization states there “is no evidence wearing a mask by a healthy person in a community setting can prevent infection with respiratory viruses, including COVID-19” and further concludes “universal community masking” is ineffective at preventing “infection from respiratory viruses, including COVID-19.” The WHO recommended against wearing medical masks as they “may create a false sense of security” against COVID-19, while it further went out of its way to reiterate that there is “no evidence available on a [mask’s] usefulness to protect non-sick persons.”

https://apps.who.int/iris/bitstream/handle/10665/331693/WHO-2019-nCov-IPC_Masks-2020.3-eng.pdf?sequence=1&isAllowed=y *Advice on the Use of Masks in the Context of COVID-19 – Guidance*, World Health Organization (April 6, 2020)

- British Medical Journal notes that cloth face masks may INCREASE spread of virus: “This study is the first RCT of cloth masks, and the results caution against the use of cloth masks. This is an important finding to inform occupational health and safety. Moisture retention, reuse of cloth masks and poor filtration may result in increased risk of infection.”

<https://bmjopen.bmj.com/content/5/4/e006577> *A cluster randomised trial of cloth masks compared with medical masks in healthcare workers*

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- Explanation of Why Face Masks Do Not Work (reviewing other studies)

<https://www.oralhealthgroup.com/features/face-masks-dont-work-revealing-review/>

- Canadian Physicist Reviewing Why Face Masks Do Not Work. <http://ocla.ca/wp-content/uploads/2020/04/Rancourt-Masks-dont-work-review-science-re-COVID19-policy.pdf>

- Wearing respirators come[s] with a host of physiological and psychological burdens. These can interfere with task performances and reduce work efficiency. These burdens can even be severe enough to cause life-threatening conditions if not ameliorated. Arthur Johnson, *Journal of Biological Engineering* (2016).

- When the N95 respirator was tested in use in 2010, the “dead-space oxygen and carbon dioxide levels did not meet the Occupational Safety and Health Administration’s ambient workplace standards.”

- In a study conducted by the National Taiwan University Hospital fifteen years ago, it was found that the use of N-95 masks in healthcare workers caused them to experience hypoxemia, a low level of oxygen in the blood, and hypercapnia, an elevation in the blood's

carbon dioxide levels. Not only did the mask create dangerously low levels of oxygen and an equally dangerous spike in carbon dioxide in the human body, the study found that “medical staff are at increased risk of getting 'Severe acute respiratory syndrome' (SARS) [from] wearing N95 masks...” Lastly, the study’s authors further found that “dizziness, headache, and short[ness] of breath are commonly experienced by the medical staff wearing N95 masks” and that the “ability to make correct decisions” was also likely impaired. *The Physiological Impact of N95 Masks on Medical Staff, National Taiwan University Hospital (June 2005).*

- Studies show that headaches in medical professionals are commonly found as a result of mask-wearing, which is a sign of hypoxia: Just under 10% of the healthcare workers in one study experienced such severe symptoms that they were forced to take, on average, two full days of sick leave from their healthcare jobs, while 60% of these healthcare professionals “required use of abortive analgesics because of headache.” *Headaches and the N95 Face-Mask Amongst Healthcare Providers. Lim EC1, Seet RC, Lee KH, Wilder-Smith EP, Chuah BY, Ong BK, Acta Neurologica Scandinavica, 28 Feb 2006, 113(3):199-202.*

- A more recent study involving 159 healthcare workers aged 21 to 35 years of age found that 81% developed headaches from wearing a face mask – which is a sign of dangerously low levels of oxygenation – and ALL healthcare workers felt like the headaches affected their work performance. *Ong JJY et al. Headaches associated with personal protective equipment- A cross-sectional study among frontline healthcare workers during COVID-19. Headache 2020;60(5):864-877.*

- Pregnant women wearing N-95 masks were found to have breathing difficulties associated with the use of the mask. *Are Face Masks Effective Against Covid-19? The Science Times (May 25, 2020).*

- “It is known that the N95 mask, if worn for hours, can reduce blood oxygenation as much as 20%” which in turn “can lead to a loss of consciousness, as happened to the hapless fellow driving around alone in his car wearing an N95 mask, causing him to pass out, and to crash his car and sustain injuries. I am sure that we have several cases of elderly individuals or any person with poor lung function passing out, hitting their head. This, of course, can lead to death.” *Are Face Masks Effective Against Covid-19? The Science Times (May 25, 2020).*

- In this study, researchers examined the blood oxygen levels in 53 surgeons. They measured blood oxygenation before surgery as well as at the end of surgeries. The researchers found that the mask reduced the blood oxygen levels significantly. The longer the duration of wearing the mask, the greater the fall in blood oxygen levels. *Bader A et al. Preliminary report on surgical mask induced deoxygenation during major surgery. Neurocirugia 2008;19:12-126.*

- In a study of dentists and dental assistants who adopted new protocols since COVID, headaches jumped from 16% pre-COVID to 65%, with half of respondents (49%) noting it was not hard to breathe “all the time” and 40% noting it was hard to breathe some of the time. [https://www.dentistryiq.com/covid-19/article/14177630/headaches-exhaustion-anxiety-the-physical-and-emotional-challenges-of-returning-to-work-during-the-pandemic?utm_source=RDH%20eVillage%20%26%20Product&utm_medium=email&utm_campaign=CPS200611069&o_eid=3982E9300967G0X&rdx.ident\[pull\]=omeda%7C3982E9300967G0X&oly_enc_id=3982E9300967G0X&fbclid=IwAR1Dr974eARlmMqMikUxsl8XBZjvzOznYcgEFxJLWUoR-n1zjxfUxih_OKY#cid-14177681](https://www.dentistryiq.com/covid-19/article/14177630/headaches-exhaustion-anxiety-the-physical-and-emotional-challenges-of-returning-to-work-during-the-pandemic?utm_source=RDH%20eVillage%20%26%20Product&utm_medium=email&utm_campaign=CPS200611069&o_eid=3982E9300967G0X&rdx.ident[pull]=omeda%7C3982E9300967G0X&oly_enc_id=3982E9300967G0X&fbclid=IwAR1Dr974eARlmMqMikUxsl8XBZjvzOznYcgEFxJLWUoR-n1zjxfUxih_OKY#cid-14177681)

● The immunity of the mask wearer – and his or her subsequent ability to fight off COVID-19 or any other harmful infection – is actually harmed by wearing a mask. The drop in oxygen levels (hypoxia) noted in many studies is directly associated with an impairment in immunity. In terms of the biological effects, what the studies have shown is that the lowered rate of oxygen (hypoxia) in turn inhibits the production of the type of primary immune cells that our bodies use to fight viral infections (known as the CD4+ T-lymphocyte). Functionally speaking, what happens inside our bodies is that the decrease in oxygen causes a spike in the level of a compound called hypoxia-inducible-factor-1 (HIF-1). Once that compound spikes, it in turn inhibits the production of T-lymphocytes we need for our bodies to fight off invaders and infections. Yet worse, the lack of oxygen stimulates a powerful inhibitor of the immune system (a cell called the Tregs), which in turn makes one’s body ripe for contracting a COVID-19 infection and experiencing said illness more severely: “This sets the stage for contracting any infection, including COVID-19, and making the consequences of that infection much graver. In essence, your mask may very well put you at an increased risk of infections and if so, having a much worse outcome.” Russell Blaylock, *Id.* (quoting Shehade H et al. *Cutting edge: Hypoxia-Inducible Factor-1 negatively regulates Th1 function. J Immunol* 2015;195:1372-1376. See also: Westendorf AM et al. *Hypoxia enhances immunosuppression by inhibiting CD4+ effector T cell function and promoting Treg activity. Cell Physiol Biochem* 2017;41:1271-84. See further: Sceneay J et al. *Hypoxia-driven immunosuppression contributes to the pre-metastatic niche. Oncoimmunology* 2013;2:1 e22355.

● People with cancer may be at a further risk from hypoxia – as cancer cells grow best in a bodily environment that is low in oxygen. Low oxygen also promotes systemic inflammation which, in turn, promotes “the growth, invasion and spread of cancers.” Aggarwal BB. *Nuclear factor-kappaB: The enemy within. Cancer Cell* 2004;6:203-208, and Blaylock RL. *Immunoexcitatory mechanisms in glioma proliferation, invasion and occasional metastasis. Surg Neurol Inter* 2013;4:15.

● Repeated episodes of low oxygen – known as intermittent hypoxia – also “causes atherosclerosis” and hence increases “all cardiovascular events” such as heart attacks – as well as adverse cerebral events like stroke. Blaylock, quoting Savransky V et al. *Chronic intermittent hypoxia induces atherosclerosis. Am J Resp Crit Care Med* 2007;175:1290-1297.

● It appears the virus may be able to enter the brain. According to those who practice neurosurgery, in most instances where the virus enters the brain, it does so by way of the olfactory nerves (smell nerves) – and accordingly – by wearing a mask “the exhaled viruses will not be able to escape, and will concentrate in the nasal passages, enter the olfactory nerves and travel into the brain.” Blaylock, reviewing Baig AM et al. *Evidence of the COVID-19 virus targeting the CNS: Tissue distribution, host-virus interaction, and proposed neurotropic mechanisms. ACS Chem Neurosci* 2020;11:7:995-998. Wu Y et al. *Nervous system involvement after infection with COVID-19 and other coronaviruses. Brain Behavior, and Immunity. Perlman S et al. Spread of a neurotropic murine coronavirus into the CNS via the trigeminal and olfactory nerves. Virology* 1989;170:556-560.