NIH Stanford Study Proves Face Masks Worthless Against Covid

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The diapers most of us are wearing on our face most of the time apparently have no effect at stopping Covid-19. This explains a lot.

Did you hear about the peer-reviewed study done by Stanford University that demonstrates beyond a reasonable doubt that face masks have absolutely zero chance of preventing the spread of Covid-19? No? It was posted on the the National Center for Biotechnological Information government website. The NCBI is a branch of the National Institute for Health, so one would think such a study would be widely reported by mainstream media and embraced by the "science-loving" folks in Big Tech.

Instead, a DuckDuckGo search reveals it was picked up by ZERO mainstream media outlets *and Big Tech tyrants will suspend people who post it*, as political strategist Steve Cortes learned the hard way when he posted a Tweet that went against the face mask narrative. The Tweet itself featured a quote and a link that prompted Twitter to *suspend his account*, potentially indefinitely.

He was quoting directly from the NCBI publication of the study. The government website he linked to features a peer-reviewed study by Stanford University's Baruch Vainshelboim. In it, he cited 67 scholars, doctors, scientists, and other studies to support his conclusions.

The sentence Cortes quoted from the study's conclusion reads: "*The data suggest that both medical and non-medical facemasks are ineffective to block human-to-human transmission of viral and infectious disease such SARS-CoV-2 and COVID-19, supporting against the usage of facemasks.*"

Twitter messaged Cortes demanding he delete the Tweet, citing that he broke Twitter rules specifically for, "*Violating the policy on spreading misleading and potentially harmful information related to COVID-19.*"

Vainshelboim drew many conclusions from the vast information he compiled, but arguably the biggest bombshell in it can be found in the "Efficacy of facemasks" section [emphasis added]:

*According to the current knowledge, the virus SARS-CoV-2 has a diameter of 60 nm to 140 nm [nanometers (billionth of a meter)] [16], [17], while medical and non-medical facemasks' thread diameter ranges from 55 µm to 440 µm [micrometers (one millionth of a meter), **which is more than 1000 times larger** [25]. Due to the difference in sizes between SARS-CoV-2 diameter and facemasks thread diameter (**the virus is 1000 times smaller**), SARS-CoV-2 can easily pass through any facemask*

This study isn't the only one out there that demonstrates scientifically the inefficacy and dangers associated with constant use of face masks. One would think that considering the source, this type of information would be acceptable to even Big Tech tyrants. After all, they constantly chide us about following the science. *Well, here's the science.*

Leaders in Democrat-led states should rejoice at this information since it explains why their Covid case numbers keep going up despite their ongoing lockdowns while Republican-led states are doing better. *The real science gives them the answer that Dr. Anthony Fauci fails to grasp.*

We're posting the study for posterity; one never knows when the government or their puppetmasters in Silicon Valley will determine it needs to come down:

Facemasks In The COVID-19 Era: A Health Hypothesis

Abstract

Many countries across the globe utilized medical and non-medical facemasks as non-pharmaceutical intervention for reducing the transmission and infectivity of coronavirus disease-2019 (COVID-19). Although, scientific evidence supporting facemasks' efficacy is lacking, adverse physiological, psychological and health effects are established.

Is has been hypothesized that facemasks have compromised safety and efficacy profile and should be avoided from use. The current article comprehensively summarizes scientific evidences with respect to wearing facemasks in the COVID-19 era, providing prosper information for public health and decisions making.

Introduction

Facemasks are part of non-pharmaceutical interventions providing some breathing barrier to the mouth and nose that have been utilized for reducing the transmission of respiratory pathogens [1]. Facemasks can be medical and non-medical, where two types of the medical masks primarily used by healthcare workers [1], [2]. The first type is National Institute for Occupational Safety and Health (NIOSH)-certified N95 mask, a filtering face-piece respirator, and the second type is a surgical mask [1].

The designed and intended uses of N95 and surgical masks are different in the type of protection they potentially provide. The N95s are typically composed of electret filter media and seal tightly to the face of the wearer, whereas surgical masks are generally loose fitting and may or may not contain electret-filtering media. The N95s are designed to reduce the wearer's inhalation exposure to infectious and harmful particles from the environment such as during extermination of insects.

In contrast, surgical masks are designed to provide a barrier protection against splash, spittle and other body fluids to spray from the wearer (such as surgeon) to the sterile environment (patient during operation) for reducing the risk of contamination [1].

The third type of facemasks are the non-medical cloth or fabric masks. The non-medical facemasks are made from a variety of woven and non-woven materials such as Polypropylene, Cotton, Polyester, Cellulose, Gauze and Silk. Although non-medical cloth or fabric facemasks are neither a medical device nor personal protective equipment, some standards have been developed by the French Standardization Association (AFNOR Group) to define a minimum performance for filtration and breathability capacity [2].

The current article reviews the scientific evidences with respect to safety and efficacy of wearing facemasks, describing the physiological and psychological effects and the potential long-term consequences on health.

Hypothesis

On January 30, 2020, the World Health Organization (WHO) announced a global public health emergency of severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2) causing illness of coronavirus disease-2019 (COVID-19) [3]. As of October 1, 2020, worldwide 34,166,633 cases were reported and 1,018,876 have died with virus diagnosis. Interestingly, 99% of the detected cases with SARS-CoV-2 are asymptomatic or have mild condition, which contradicts with the virus name (severe acute respiratory syndrome-coronavirus-2) [4].

Although infection fatality rate (number of death cases divided by number of reported cases) initially seems quite high 0.029 (2.9%) [4], this overestimation related to limited number of COVID-19 tests performed which biases towards higher rates. Given the fact that asymptomatic or minimally symptomatic cases is several times higher than the number of reported cases, the case fatality rate is considerably less than 1% [5].

This was confirmed by the head of National Institute of Allergy and Infectious Diseases from US stating, "*the overall clinical consequences of COVID-19 are similar to those of severe seasonal influenza*" [5], having a case fatality rate of approximately 0.1% [5], [6], [7], [8]. In addition, data from hospitalized patients with COVID-19 and general public indicate that the majority of deaths were among older and chronically ill individuals, supporting the possibility that the virus may exacerbates existing conditions but rarely causes death by itself [9], [10]. SARS-CoV-2 primarily affects respiratory system and can cause complications such as acute respiratory distress syndrome (ARDS), respiratory failure and death [3], [9].

It is not clear however, what the scientific and clinical basis for wearing facemasks as protective strategy, given the fact that facemasks restrict breathing, causing hypoxemia and hypercapnia and increase the risk for respiratory complications, self-contamination and exacerbation of existing chronic conditions [2], [11], [12], [13], [14].

Of note, hyperoxia or oxygen supplementation (breathing air with high partial O2 pressures that above the sea levels) has been well established as therapeutic and curative practice for variety acute and chronic conditions including respiratory complications [11], [15]. It fact, the current standard of care practice for treating hospitalized patients with COVID-19 is breathing 100% oxygen [16], [17], [18].

Although several countries mandated wearing facemask in health care settings and public areas, scientific evidences are lacking supporting their efficacy for reducing morbidity or mortality associated with infectious or viral diseases [2], [14], [19]. Therefore, it has been hypothesized: 1) the practice of wearing facemasks has compromised safety and efficacy profile, 2) Both medical and non-medical facemasks are ineffective to reduce human-to-human transmission and infectivity of SARS-CoV-2 and COVID-19, 3) Wearing facemasks has adverse physiological and psychological effects, 4) Long-term consequences of wearing facemasks on health are detrimental.

Evolution Of Hypothesis

Breathing Physiology

Breathing is one of the most important physiological functions to sustain life and health. Human body requires a continuous and adequate oxygen (O2) supply to all organs and cells for normal function and survival. Breathing is also an essential process for removing metabolic byproducts [carbon dioxide (CO2)] occurring during cell respiration [12], [13]. It is well established that acute significant deficit in O2 (hypoxemia) and increased levels of CO2 (hypercapnia) even for few minutes can be severely harmful and lethal, while chronic hypoxemia and hypercapnia cause health deterioration, exacerbation of existing conditions, morbidity and ultimately mortality [11], [20], [21], [22].

Emergency medicine demonstrates that 5–6 min of severe hypoxemia during cardiac arrest will cause brain death with extremely poor survival rates [20], [21], [22], [23]. On the other hand, chronic mild or moderate hypoxemia and hypercapnia such as from wearing facemasks resulting in shifting to higher contribution of anaerobic energy metabolism, decrease in pH levels and increase in cells and blood acidity, toxicity, oxidative stress, chronic inflammation, immunosuppression and health deterioration [24], [11], [12], [13].

Efficacy of facemasks

The physical properties of medical and non-medical facemasks suggest that facemasks are ineffective to block viral particles due to their difference in scales [16], [17], [25]. According to the current knowledge, the virus SARS-CoV-2 has a diameter of 60 nm to 140 nm [nanometers (billionth of a meter)] [16], [17], while medical and non-medical facemasks' thread diameter ranges from 55 µm to 440 µm [micrometers (one millionth of a meter), which is more than 1000 times larger [25].

Due to the difference in sizes between SARS-CoV-2 diameter and facemasks thread diameter (the virus is 1000 times smaller), SARS-CoV-2 can easily pass through any facemask [25]. In addition, the efficiency filtration rate of facemasks is poor, ranging from 0.7% in non-surgical, cotton-gauze woven mask to 26% in cotton sweeter material [2]. With respect to surgical and N95 medical facemasks, the efficiency filtration rate falls to 15% and 58%, respectively when even small gap between the mask and the face exists [25].

Clinical scientific evidence challenges further the efficacy of facemasks to block human-to-human transmission or infectivity. A randomized controlled trial (RCT) of 246 participants [123 (50%) symptomatic)] who were allocated to either wearing or not wearing surgical facemask, assessing viruses transmission including coronavirus [26]. The results of this study showed that among symptomatic individuals (those with fever, cough, sore throat, runny nose ect…) there was no difference between wearing and not wearing facemask for coronavirus droplets transmission of particles of >5 µm.

Among asymptomatic individuals, there was no droplets or aerosols coronavirus detected from any participant with or without the mask, suggesting that asymptomatic individuals do not transmit or infect other people [26]. This was further supported by a study on infectivity where 445 asymptomatic individuals were exposed to asymptomatic SARS-CoV-2 carrier (been positive for SARS-CoV-2) using close contact (shared quarantine space) for a median of 4 to 5 days.

The study found that *none of the 445 individuals was infected with SARS-CoV-2* confirmed by real-time reverse transcription polymerase [27].

A meta-analysis among health care workers found that compared to no masks, surgical mask and N95 respirators were not effective against transmission of viral infections or influenza-like illness based on six RCTs [28]. Using separate analysis of 23 observational studies, this meta-analysis found *no protective effect of medical mask or N95 respirators against SARS virus* [28].

A recent systematic review of 39 studies including 33,867 participants in community settings (self-report illness), found no difference between N95 respirators versus surgical masks and surgical mask versus no masks in the risk for developing influenza or influenza-like illness, suggesting their ineffectiveness of blocking viral transmissions in community settings [29].

Another meta-analysis of 44 non-RCT studies (n = 25,697 participants) examining the potential risk reduction of facemasks against SARS, middle east respiratory syndrome (MERS) and COVID-19 transmissions [30]. The meta-analysis included four specific studies on COVID-19 transmission (5,929 participants, primarily health-care workers used N95 masks). Although the overall findings showed reduced risk of virus transmission with facemasks, the analysis had severe limitations to draw conclusions.

One of the four COVID-19 studies had zero infected cases in both arms, and was excluded from meta-analytic calculation. Other two COVID-19 studies had unadjusted models, and were also excluded from the overall analysis. The meta-analytic results were based on only one COVID-19, one MERS and 8 SARS studies, resulting in high selection bias of the studies and contamination of the results between different viruses. Based on four COVID-19 studies, the meta-analysis failed to demonstrate risk reduction of facemasks for COVID-19 transmission, where the authors reported that the results of meta-analysis have low certainty and are inconclusive [30].

In early publication the WHO stated that "*facemasks are not required, as no evidence is available on its usefulness to protect non-sick persons*" [14]. In the same publication, the WHO declared that "*cloth (e.g. cotton or gauze) masks are not recommended under any circumstance*" [14]. Conversely, in later publication the WHO stated that the usage of fabric-made facemasks (Polypropylene, Cotton, Polyester, Cellulose, Gauze and Silk) is a general community practice for "*preventing the infected wearer transmitting the virus to others and/or to offer protection to the healthy wearer against infection (prevention)*" [2].

The same publication further conflicted itself by stating that due to the lower filtration, breathability and overall performance of fabric facemasks, the usage of woven fabric mask such as cloth, and/or non-woven fabrics, should only be considered for infected persons and not for prevention practice in asymptomatic individuals [2]. The Central for Disease Control and Prevention (CDC) made similar recommendation, stating that only symptomatic persons should consider wearing facemask, while for asymptomatic individuals this practice is not recommended [31].

Consistent with the CDC, clinical scientists from Departments of Infectious Diseases and Microbiology in Australia counsel against facemasks usage for health-care workers, arguing that there is no justification for such practice while normal caring relationship between patients and medical staff could be compromised [32]. Moreover, the WHO repeatedly announced that "*at present, there is no direct evidence (from studies on COVID-19) on the effectiveness face masking of healthy people in the community to prevent infection of respiratory viruses, including COVID-19*"[2].

Despite these controversies, the potential harms and risks of wearing facemasks were clearly acknowledged. These including self-contamination due to hand practice or non-replaced when the mask is wet, soiled or damaged, development of facial skin lesions, irritant dermatitis or worsening acne and psychological discomfort. Vulnerable populations such as people with mental health disorders, developmental disabilities, hearing problems, those living in hot and humid environments, children and patients with respiratory conditions are at significant health risk for complications and harm [2].

Physiological effects of wearing facemasks

Wearing facemask mechanically restricts breathing by increasing the resistance of air movement during both inhalation and exhalation process [12], [13]. Although, intermittent (several times a week) and repetitive (10–15 breaths for 2–4 sets) increase in respiration resistance may be adaptive for strengthening respiratory muscles [33], [34], prolonged and continues effect of wearing facemask is maladaptive and could be detrimental for health [11], [12], [13].

In normal conditions at the sea level, air contains 20.93% O2 and 0.03% CO2, providing partial pressures of 100 mmHg and 40 mmHg for these gases in the arterial blood, respectively. These gas concentrations significantly altered when breathing occurs through facemask. A trapped air remaining between the mouth, nose and the facemask is rebreathed repeatedly in and out of the body, containing low O2 and high CO2 concentrations, causing hypoxemia and hypercapnia [35], [36], [11], [12], [13].

Severe hypoxemia may also provoke cardiopulmonary and neurological complications and is considered an important clinical sign in cardiopulmonary medicine [37], [38], [39], [40], [41], [42]. Low oxygen content in the arterial blood can cause myocardial ischemia, serious arrhythmias, right or left ventricular dysfunction, dizziness, hypotension, syncope and pulmonary hypertension [43]. Chronic low-grade hypoxemia and hypercapnia as result of using facemask can cause exacerbation of existing cardiopulmonary, metabolic, vascular and neurological conditions [37], [38], [39], [40], [41], [42].

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