

<https://www.meehanmd.com/blog/2020-10-10-an-evidence-based-scientific-analysis-of-why-masks-are-ineffective-unnecessary-and-harmful/>

Masking Children in Schools is Unnecessary - So Says The Science

School and daycare transmission studies show that transmission of Covid-19 among unmasked children is remarkably low.

German study finds low Covid-19 infection rate in schools. Tests of pupils and teachers in Saxony suggest children may act as brake on infection.

The study by the University hospital in Dresden analyzed blood samples from almost 1,500 children and 500 teachers from 13 schools in Saxony, Germany suggests schools may not play as big a role in spreading the virus as some had feared.

“Of the almost 2,000 samples, only 12 had antibodies,” said Reinhard Berner, a professor of pediatrics at the hospital. In other words, in Saxony’s open and unmasked schools **0.6% of school children demonstrated SARS-CoV-2 antibodies.**

All cases were asymptomatic. There were no fatalities.

“**Children may even act as a brake on infection,**” Berner told a news conference, saying “**infections in schools had not led to an outbreak, while the spread of the virus within households was also less dynamic than previously thought.**”

“**For other states with low infection rates, the study suggests schools could be reopened without fear of causing widespread outbreaks of the virus,**” Berner said.

Sweden and Finland: 0.05% of children infected by Covid-19

Sweden kept schools open and unmasked during the pandemic, yet their decision to adhere to the science and do what has always been done before, did not lead to a higher rate of infection among their children compared to neighboring Finland, where schools were closed temporarily.

Based on Covid-19 case data collected from each country during the time period, Feb. 24 to June 14, the percentage of children between the ages of 1-19 infected by Covid-19 was the same:

- Sweden: 1,124 cases 0.05%
- Finland: 584 cases 0.05%

Separate studies by Sweden’s Karolinska Institutet (KI), an independent medical research institute, and the European Network of Ombudspersons for Children and Unicef, showed that **Swedish children fared better than children in other countries during the pandemic, both in terms of education and mental health.**

COVID-19 transmission rate 0.3% among children in schools and nurseries in New South Wales, Australia

The Lancet Child & Adolescent Health: Effective testing and contact tracing is essential for schools to safely open during COVID-19 pandemic, two studies show. The Lancet; August 3, 2020. https://www.eurekalert.org/pub_releases/2020-08/tl-pss080320.php

Real world data from schools where masks were not required or worn demonstrates a remarkably low rate of transmission of SARS-CoV-2. Analysis of COVID-19 case data from **3,103 schools** and approximately **4,600 nurseries** in New South Wales demonstrate that schools and nurseries do not pose a high risk for COVID-19 transmission.

Subset analysis found that only 27 children or teachers went to school while they were infectious, with an additional 18 people later becoming infected. Out of 1,448 contacts in total, the **rate of secondary transmission was found to be 1.2%**.

A subset analysis of 7 schools and nurseries that underwent additional investigations including antibody testing, symptom surveys, and extra RT-PCR testing for the virus showed that the transmission rates among children and staff were extremely low:

- child-to-child rate was 0.3%,
- child-to-staff rate was 1.0%
- staff-to-child rate was 1.5%
- staff-to-staff rate was 4.4%.

The researchers noted that this finding suggests that **children are less likely to transmit the virus than adults**.

While coronavirus is obviously concerning and a very real threat to some people (namely, the elderly and immunocompromised), these data also show that the risk for the rest of the population is extraordinarily low.

Masks are Harmful: 17 Ways That Masks Can Cause Harm

As a physician and former medical journal editor, I've carefully read the scientific literature regarding the use of facemasks to mitigate viral transmission. I believe the public health experts have community wearing of masks all wrong. Here are a few of the mechanisms by which medical masks can be harmful to their wearers and community wearing of facemasks is a very bad idea:

Wearing masks for extended periods increased incidences of headaches and negatively affected work performance.

See Jonathan J.Y. Ong, et al., Headaches Associated With Personal Protective Equipment – A Cross-Sectional Study Among Frontline Healthcare Workers During COVID-19, Headache, the Journal of Head and Face Pain (May 2020).

1. Medical masks adversely affect respiratory physiology and function.

- **Masks inhibit airflow into and out of the lungs.**
 - For people with asthma, chronic obstructive pulmonary disease (COPD), and many other chronic lung diseases, face masks are intolerable to wear as they worsen breathlessness.[R]
- Medical masks lower blood oxygen and raise carbon dioxide such that respiratory rate and depth of breaths are increased.[R]
 - Decreasing oxygen and increasing carbon dioxide in the bloodstream stimulates a compensatory response in the respiratory centers of the brain. These changes in blood gases result in **increases in both frequency and depth of breaths.**
 - As masks increase both the frequency and depth of respirations (breaths), they increase the likelihood that each respiration will contain a larger amount of infectious viral particles. This may worsen the community transmission of CoVID-19 as infected people wearing masks exhale respiratory plumes loaded with greater levels of infectious viral particles. These infectious plumes readily move around the sides, bottom, and top of masks.
 - This may also increase the severity of CoVID-19 as the **increased tidal volume delivers the viral particles deeper into the lungs.**
 - These effects are amplified if facemasks are contaminated with the viruses, bacteria, or fungi that find their way or opportunistically grow in the warm, moist environment that medical masks quickly become.

2. Medical masks lower oxygen levels in the blood.[R]

Wearing a mask for more than a few minutes causes a significant reduction in a person's blood oxygen level.

- Beder, A., U. Büyükkoçak, H. Sabuncuoğlu, Z. A. Keskil, and S. Keskil. 2008. "Preliminary Report on Surgical Mask Induced Deoxygenation during Major Surgery." *Neurocirugia* 19 (2): 121–26. DOI: [10.1016/s1130-1473\(08\)70235-5](https://doi.org/10.1016/s1130-1473(08)70235-5)
 - This study of 53 surgeons evaluated the effect of surgical masks on oxygen saturation of hemoglobin in surgeons performing surgery.
 - The study revealed the surgeons experienced a significant decrease in the oxygen saturation of arterial pulsations (SpO₂) and a slight increase in pulse rates after one hour. The decrease was more prominent in the surgeons over the age of 35.
 - Given that **a small decrease in SpO₂ reflects a large decrease in partial pressure of oxygen in the arterial blood (PaO₂)**[R], the findings of this study suggests that surgical masks worn more than one hour may lower arterial oxygen enough to induce physiologically detrimental effects.
- Here are two cases of the tragic consequences of forcing children to wear masks: Two Chinese boys drop dead while wearing face masks during physical exercise

classes.[R][R]

Two boys from two Chinese cities died of sudden cardiac arrest within a week. The first boy, 15, collapsed after jogging in PE class while wearing a face mask on April 24. The other boy, 14, reportedly died during a running exam while wearing a mask.

Why would healthy boys drop dead while wearing masks and running in gym class?! To answer this question, we must consider how mask induced deoxygenation and increased oxygen demands of heart muscle during exercise could have precipitated heart attacks in otherwise healthy teenagers:

- **Point #1:** Heart muscle needs oxygen to survive. And the harder the heart works, the more oxygen it requires. The American Heart Association says this about heart attacks:
 - "Your **heart muscle needs oxygen to survive**. A heart attack occurs when the blood flow that brings **oxygen to the heart muscle is severely reduced** or cut off completely."[\[R\]](#)
 - **Point #2:** Masks block air intake and decrease arterial oxygen.
- Studies of masked individuals have shown that mask wear decreases arterial oxygen. For example, the effects of surgical masks worn by surgeons in the operating room (an environment in which the oxygen blocking effects of masks are minimized by the high air flow, increased oxygen levels, and cool temperature of the operating suite) during major surgery showed a significant decrease in arterial oxygen.[\[R\]](#) The lesson here is that medical masks should not be worn during intense exercise. As described above and shown in the study of surgeons wearing surgical masks, medical masks block oxygen intake. Depriving the heart of oxygen while exercising, especially intense exercise, could precipitate an acute heart attack.

Any questions? Wait...there's more...

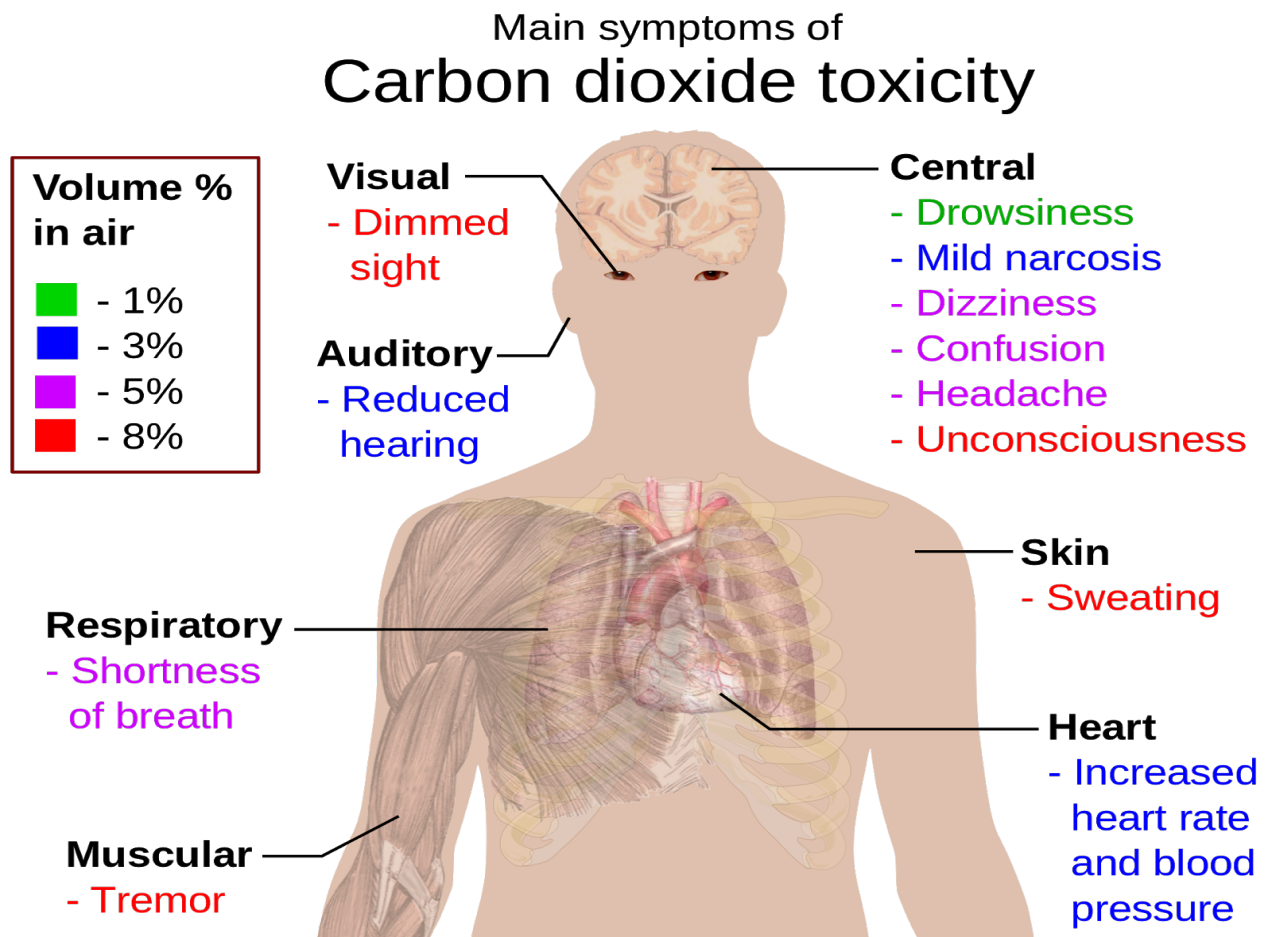
- [Jogger's lung collapses after he ran for 2.5 miles while wearing a face mask](#) [\[R\]](#) Mr Zhang's left lung was punctured due to high pressure caused by running. The 26-year-old became breathless while jogging with a mask on in China. Doctors said his punctured lung was caused by jogging with a face covering. He is now in stable condition after undergoing an operation, the hospital said.
- Hypoxia increases the risk of blood clot formation.[\[R\]](#)
- Lowering arterial oxygen suppresses the immune system, thus increasing the susceptibility of mask wearers to infectious disease.

3. Medical masks raise carbon dioxide levels in the blood.

Although the body has robust mechanisms for mitigating transient and minor elevations of CO₂ in the air we breathe, these mechanisms can easily be overwhelmed by chronic exposure to

significant elevations in CO₂, such as occurs with prolonged wearing of a medical mask.

- The science clearly demonstrates that **face masks cause carbon dioxide rebreathing and hypercapnia** [R]
 - Fletcher, S. J., M. Clark, and P. J. Stanley. 2006. "Carbon Dioxide Re-Breathing with Close Fitting Face Respirator Masks." *Anaesthesia* 61 (9): 910.
<https://onlinelibrary.wiley.com/doi/full/10.1111/j.1365-2044.2006.04767.x>
- Exhaled air is rich in [carbon dioxide](#), a waste product of [cellular respiration](#).
- A portion of carbon dioxide previously exhaled is inspired (breathed) at each respiratory cycle.
- **Masks trap CO₂ rich respiratory exhalations at the mask-mouth interface, force re-breathing of CO₂ rich exhalations, raise carbon di oxide blood (CO₂) levels.** [R]



- Objective evidence demonstrating how masks increase blood carbon dioxide levels and negatively impact health and function.
 - **Transcranial Ultrasound Doppler (TCUD)** is a noninvasive means of assessing blood flow in the cerebral vasculature. The increase in carbon dioxide partial

- pressures (PCO₂) caused by medical masks can be assessed by TCUD.^[R]
- Elevation of PCO₂ causes vasodilation of the arteriolar channels leading to a decrease in peripheral vascular resistance. The decrease in peripheral vascular resistance is responsible for the changes in cerebrovascular circulation time, CBF, and the velocity of flow (V) in cerebral arteries.
 - Medical masks force the wearer to inspire (re-breathe) air that is a mix of air from the local environment and the respiratory waste products from the mask wearer's previous exhalations.
- Respiratory exhalations contain significantly higher levels of carbon dioxide (CO₂), one of the waste products of respiration.
 - The pulmonary system is designed to collect oxygen and remove CO₂ from the body. Masks trap CO₂ rich exhalations at the mask-mouth interface.
 - Changes in arterial PCO₂ considerably influence cranial blood flow (CBF).^[R]
 - Transcranial Ultrasound Doppler (TCUD) studies on masked and unmasked individuals demonstrate the changes in blood flow in the brain the result from the arterial CO₂ elevation that occurs within seconds of donning a mask.

This video demonstrates the use of TCUD and heart rate variability to measure the adverse effects of masking a healthy nine year old child: <https://bit.ly/2GGQWiZ>

4. SARS CoV-2 is armed with a "furin cleavage site" that makes it more pathogenic.

- The furin cleavage site makes the virus more capable of invading human cells.
- The furin cleavage site makes the virus even more capable of invading cells when arterial oxygen levels decline.^[R]
- Therefore, wearing a medical mask may increase the severity of CoVID-19.

5. Medical masks trap exhaled viral (and other) pathogens in the mouth/mask interspace, increase viral/infectious load, and increase the severity of disease.

- Face masks trap exhaled viral particles in the mouth/mask interspace. The trapped viral particles are prevented from removal from the airways. The mask wearer is then forced to re-breathe the viral particles, thus increasing infectious viral particles in the airways and lungs.
- In this way, surgical masks cause self-inoculation, increase viral load, and increase the severity of disease.
- Neurosurgeon, Russell Blaylock, MD, raises additional concerns: "By wearing a mask, the exhaled viruses will not be able to escape and will concentrate in the nasal passages,

enter the lungs, olfactory nerves, and travel into the brain.”[R]

- Face masks **trap exhaled viral particles** in the mouth/mask interspace.[R] The trapped viral particles are prevented from removal from the airways. The mask wearer is thus forced to **re-breathe** the viral particles, increasing infectious viral particles in the airways and lungs. In this way, Medical masks cause self-inoculation, increase viral load, and increase the severity of disease.
- Asymptomatic or mild cases of CoVID-19 become more severe when the infected is masked, oxygen lowers, viral load increases from particle re-breathing, and the disease **overwhelms the innate immune system**.
 - The main purpose of the innate immune response is to immediately prevent the spread and movement of foreign pathogens throughout the body.[R]
 - The innate immune system plays a crucial role in destroying the virus, preventing infection, or decreasing the viral load to decrease the severity of infection.
 - The innate immunity’s effectiveness is highly dependent on the viral load. If face masks increase viral particle re-breathing at the same time they create a humid habitat where SARS-CoV-2 remains actively infectious, the mask increases the viral load and can overwhelm the innate immune system.
- This trapping, re-breathing, and increasing pathogen load delivered to the lungs becomes dramatically more dangerous when the medical mask becomes contaminated with the opportunistic viruses, bacteria, and fungi that can grow in the warm, moist environment of the mask.
- “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.” - Russell Blaylock, MD

6. SARS CoV-2 Becomes More Dangerous When Blood Oxygen Levels Decline

- Arterial oxygen desaturation is a critical issue in CoVID-19. The virus' ability to infect cells is markedly enhanced by oxygen desaturation, which has been shown to occur even in the ideal operating room environment in which surgeons operate: high air flow/exchange systems, cool temperature, and higher room oxygen levels when wearing a surgical mask.[R]
- One of the features that make SARS CoV-2 uniquely infectious is the "furin" sequence in the virus that activates increased ACE2 receptor attack and cellular invasion in low oxygen environments.[R]

7. The furin cleavage site of SARS CoV-2 increases cellular invasion, especially during hypoxia (low blood oxygen levels)[R]

- The furin cleavage site found in SARS CoV-2 is the likely result of the bioengineering “gain of function” (which means increasing the virulence of a pathogen) research

conducted at the Wuhan Institute of Virology. This unethical, dangerous, and illegal-in-most-countries research is alleged to have been [funded by Dr. Anthony Fauci \(with \\$7.4 million taxpayer dollars\)](#) and Bill Gates.

- Furin cleavage sites are found in some of the most pathogenic forms of influenza, which can be acted upon by furin and other cellular proteases. The ubiquitous expression of cellular proteases across cell types increases the potential for the virus to successfully infiltrate the host.
- Furin is a membrane-bound protease that is expressed in multiple tissues throughout the human body. Furin is expressed in significant concentrations in the lungs. Thus, viruses in the respiratory tract can make use of this enzyme to convert and activate their own surface glycoproteins. This makes their role in viral protein processing noteworthy.[\[R\]](#)
- Some of the most pathogenic forms of influenza and HIV have similar furin cleavage sites. It is not present in other bat beta coronaviruses. (By the way, Fauci built his career researching and failing to create a vaccine for HIV). The furin cleavage site is NOT present in SARS CoV-1 or MERS, or any of the other known "bat coronaviruses."
- Let me say it again, the SARS-CoV (aka, SARS-CoV-1), which is closely related to the newest SARS-CoV-2 strain, does not bear the furin cleavage site.

So, the question we should all be asking is how did the genetic sequence that codes for this serious gain of function that increases the potential for the virus to successfully infiltrate the host find its way into SARS-CoV-2?

That's the trillion dollar question; it demands a real and honest answer.

8. Cloth masks may increase the risk of contracting Covid-19 and other respiratory infections.

See MacIntyre CR, Seale H, Dung TC, et al., A cluster randomised trial of cloth masks compared with medical masks in healthcare workers, *BMJ Open* 2015; 5: e006577, US National Library of Medicine, National Institutes of Health, doi: 10.1136/bmjopen-2014-006577, April 22, 2015. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4420971/pdf/bmjopen-2014-006577.pdf>

- "This study is the first [Randomly Controlled Trial] 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."

9. Wearing a face mask may give a false sense of security

- People adopt a reduction in compliance with other infection control measures, including

social distancing and hands washing.[R]

10. Masks compromise communications and reduce social distancing

- The quality and volume of speech between two people wearing masks is considerably compromised and they may unconsciously move closer to improve communications.
- This increases the likelihood of becoming exposed to the infectious viral particles in the respiratory plumes of aerosolized droplet nuclei that escape the top, bottom, and sides of the masks.

11, Untrained and inappropriate management of face masks:

- The public is untrained and inadequately educated in the proper selection of masks (most are wrongly wearing cloth masks), proper wear, sterility management, and importance of not reusing single use masks.
- People must not touch their masks, must change their single-use masks frequently or wash them regularly, dispose of them correctly and adopt other management measures, otherwise their risks and those of others may increase.[R][R]
- We can all observe the countless ways in which people in communities are mis-wearing, mishandling, and increasing their own and the communities risk of contracting infectious disease, including CoVID-19.

12. Masks Worn Imperfectly Are Dangerous

To fully appreciate the danger of improper wear and handling of face masks, all you have to do is observe how the public is managing them. Take a trip to Walmart or your local school and observe how mask wearers pull masks from their pocket or purse, drop the masks on the floor, cough and sneeze in them, move them below the nose, on their heads, or under their chin. I see it every day. I also see their soiled and stained surgical face masks and know that these people are dangerously reusing a mask that should never be reused.

You don't need a clinical trial to determine that even when mask-wearers manage to don a fresh, sterile mask properly, keep them on for more than a few minutes at a time, they very quickly contaminate the mask, their environment, and increase their risk of infection as the mask induces them to compulsively touch their faces and their masks.

- The World Health Organization, which has repeatedly changed its position on universal masking, is adamant that **if face masks are not worn carefully, correctly, and kept sanitary, they are worse than ineffective.**
- In other words, masks worn imperfectly are dangerous.
 - See Linda Lacina, WHO updates guidance on masks for health workers and the public - here's what you need to know, World Economic Forum (June 5, 2020). <https://www.weforum.org/agenda/2020/06/who-updates-guidance-on-masks-heres-what-to-know-now/>

- People can infect themselves if they use contaminated hands to adjust a mask or repeatedly take it on or off,” explained WHO Director-General, Dr Tedros Adhanom Ghebreyesus. "I cannot say this clearly enough. Masks alone will not protect you from COVID-19."

Failing to follow strict medical standards for wearing protective equipment and specification of sterilizing and cleaning often leads to “skin and mucous membrane injury, which may cause acute and chronic dermatitis, secondary infection and aggravation of underlying skin diseases.”

- Yan, et al., Consensus of Chinese Experts on Protection of Skin and Mucous Membrane Barrier for Health-Care Workers Fighting against Coronavirus Disease 2019. Dermatologic Therapy, March 2020, e13310.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7228211/pdf/DTH-9999-e13310.pdf>

13. Masks collect and colonize viruses, bacteria, and mold.

In Germany, where schools are open and masks are mostly optional, the association of "Kinder f. Weltfrieden eV" commissioned a laboratory analysis to investigate the level of microbial contamination that results after a fresh mask is worn by a child for 6-8 hours in school. What they found was alarming to all those recommending we mask our children for several hours every day. The masks were found to be contaminated with **82 bacterial colonies and 4 mold colonies**. Where do you think the bacteria, molds, and viruses progressively colonizing and growing on the warm moist mask-mouth interface end up?

Many of the microbes get transferred to surfaces the child (or adult) touches after they touch, fiddle, and mishandle their mask. This is one of the many reasons that masks are almost certainly INCREASING the transmission of infectious disease. More dangerously, these microbes are being inhaled and delivered deep into the lungs where respiratory disease far worse than CoVID-19 can result.

The oxygen lowering effects of masks forces the body to compensate by increasing heart rate and deepening inspirations (increasing tidal volumes). Increased tidal volumes drives the mask pathogens deep into the lungs where they can cause serious pneumonia, inflammation, and tissue damage.

Furthermore, these risks are compounded by the immune suppression (CD4+ T-cell suppression) that results from diminished arterial oxygenation. **Thus, the mask-wearing child is at imminent risk for harm caused by lung infections that are far more dangerous than a CoVID-19 infection.**

In fact, based on reports from my colleagues in emergency medicine, pulmonology, and infectious disease, an **alarming explosion in bacterial pneumonias** is being reported at ERs and urgent care centers across the country.

Evidence that supports the points above:

- Zhiqing, Liu, Chang Yongyun, Chu Wenxiang, Yan Mengning, Mao Yuanqing, Zhu Zhenan, Wu Haishan, et al. 2018. "Surgical Masks as Source of Bacterial Contamination during Operative Procedures." *Journal of Orthopaedic Translation* 14 (July): 57–62.
 - This study investigated whether surgical masks (SMs) could be a potential source of bacterial shedding leading to an increased risk of surgical site infection.
 - Results: **The longer the operating time the more bacterial colonization occurred.** A significant increase [in bacterial counts] was noted in the 2-hour group.
- Colleen Huber, NMD, "Masks Are Neither Effective nor Safe," [PrimaryDoctor.Org](https://www.primarydoctor.org/masks-not-effect), July 6, 2020. <https://www.primarydoctor.org/masks-not-effect>
 - "The foregoing data show that masks serve more as instruments of obstruction of normal breathing, rather than as effective barriers to pathogens. Therefore, masks should not be used by the general public, either by adults or children, and their limitations as prophylaxis against pathogens should also be considered in medical settings."
 - Dr. Huber's article cites 42 supporting scientific studies.
- "Dr. Jenny Harries, England's deputy chief medical officer, has warned that it was not a good idea for the public to wear face masks as **the virus can get trapped in the material and causes infection when the wearer breathes in.**"
 - Angela Betsaida B. Laguipo, BSN, "Reusing Masks May Increase Your Risk of Coronavirus Infection, Expert Says," *News, Medical, Life Sciences*, March 15, 2020. <https://www.news-medical.net/news/20200315/Reusing-masks-may-increase-your-risk-of-coronavirus-infection-expert-says.aspx>
- See also, Melkorka Licea, "Mask Mouth" Is a Seriously Stinky Side Effect of Wearing Masks. *New York Post*, August 5, 2020. <https://nypost.com/2020/08/05/mask-mouth-is-a-seriously-stinky-side-effect-of-wearing-masks/>
- Consider this: [Health department investigating after high number of strep throat cases reported at Shepherd schools.](#)
- The Central Michigan District Health Department is investigating after more than **a dozen cases of strep throat** were reported within Shepherd Public Schools **despite COVID-19 protocols.**

14. Wearing a face mask makes the exhaled air (respiratory plumes) go into the eyes.

- Masks may capture respiratory jets and large respiratory droplets, but they cannot prevent the respiratory plumes composed of aerosolizable respiratory droplet nuclei to escape the top, bottom, and sides of the masks.
- The respiratory plume wafts into the eyes and generates an uncomfortable feeling and compulsion to touch and rub the eyes. If your hands are contaminated and you touch or rub your eyes, you are transmitting and infecting yourself through the ocular mucosa.[R]

15. Contact tracing studies show that asymptomatic carrier transmission is very rare.

- Asymptomatic carriers are not a major driver of the disease.[\[R\]](#)
- Therefore, one of the key reasons the public was told to wear masks, asymptomatic spreaders, should not be used as a reason for community wearing of masks.

16. Face masks and stay at home orders prevent the development of herd immunity.

- Only herd immunity can prevent pandemics; it is the only thing that ever has.
- Only herd immunity will protect the vulnerable members of society.
- Sweden's example continues to prove this point.

17. Face masks are dangerous and contraindicated for a large number of people with pre-existing medical conditions and disabilities.

- Large percentages of the population have medical conditions that make wearing a mask dangerous. Individuals should be examined by a medical professional to ensure that mask wear will not further compromise their medical condition.
 - Children with asthma (7.5% of American children) and other respiratory disabilities are being harmed by mask mandates, they are being discriminated against by businesses, schools, and public spaces that require masks.
 - Children with autism and other neurodevelopmental disorders are extremely prone to agitation and severe anxiety that results from the adverse effects, e.g., oxygen lowering effects, of masks.
 - An ever increasing number of children and young adults with autism are sensitive to touch and texture.[\[R\]](#) Covering the nose and mouth with fabric can cause sensory overload, feelings of panic, and extreme anxiety.
- If a person with a disability is not able to wear a face mask, state and local government agencies and private businesses must consider reasonable modifications to a face mask policy so that the person with the disability can participate in, or benefit from, the programs offered or goods and services that are provided. A reasonable modification means changing policies, practices, and procedures, if needed, to provide goods, services, facilities, privileges, advantages, or accommodations to an individual with a disability.
- Examples of a person with a disability who might not be able to wear a face mask include individuals with asthma, chronic obstructive pulmonary disease (COPD), or other respiratory disabilities may not be able to wear a face mask because of difficulty in or impaired breathing. People with respiratory disabilities should consult their own medical professional for advice about using face masks.

- **The CDC also states that anyone who has trouble breathing should not wear a face mask.[R]**
- People with post-traumatic stress disorder (PTSD), severe anxiety, or claustrophobia (an abnormal fear of being in enclosed or narrow places), may feel afraid or terrified when wearing a face mask. These individuals may not be able to stay calm or function when wearing a face mask.
- A person who has cerebral palsy may have difficulty moving the small muscles in the hands, wrists, or fingers. Due to their limited mobility, they may not be able to tie the strings or put the elastic loops of a face mask over the ears. This means that the individual may not be able to put on or remove a face mask without assistance.
- A person who uses mouth control devices such as a sip and puff to operate a wheelchair or assistive technology, or uses their mouth or tongue to use assistive ventilators will be unable to wear a mask.

Masking School Children is Ineffective, Unnecessary, and Harmful

Face masks are not only ineffective, they are more dangerous than parents are being told. Scientific study after scientific study over the course of many years have concluded that wearing face masks for extended periods of time puts the wearer, especially children, in imminent risk of physical and psychological harms.

If the previous section (“Masks are Harmful”) did not serve to make you question much of what you have heard about the risks of medical masks, let us now examine what the science and experts say about masking children.

Mandatory masks in school are a ‘major threat’ to children’s development, doctors warn

Wednesday, 09 September 2020

The face mask requirement at school is bad for children’s general well-being and should be abolished, 70 doctors wrote in an open letter to Flemish Education Minister Ben Weyts.

The doctors want [Flemish Education Minister] Weyts to immediately reverse his approach: no face mask requirement at school, only protect the at-risk group and only advise people with a possible risk profile to consult their doctor.

“In recent months, the general well-being of children and young people has come under severe pressure,” the letter’s authors said. “We see in our practices an increasing number of children and young people with complaints due to the rules of conduct that have been imposed on them.”

The doctors mentioned anxiety and sleep problems as well as behavioural disorders and germaphobia, which is a pathological fear of germs. They are also seeing an increase in domestic violence, isolation and deprivation.

“Mandatory face masks in schools are a major threat to their development. It ignores the

essential needs of the growing child. The well-being of children and young people is highly dependent on emotional attachment to others,” they wrote.

According to them, “the face mask requirement makes school a threatening and unsafe environment, where emotional closeness becomes difficult.”

Moreover, “there is no large-scale evidence that wearing face masks in a non-professional environment has any positive effect on the spread of viruses, let alone on general health. Nor is there any legal basis for implementing this requirement.”

“Meanwhile, it is clear that healthy children living through Covid-19 heal without complications as standard and that they subsequently contribute to the protection of their fellow human beings by increasing group immunity”.

“The only sensible measure to prevent serious illness and mortality caused by Covid-19 is to isolate individual teachers and individual children at increased risk,” they said.

“This risk assessment is not the task of the Ministry of Education,” the doctors underlined, “but the task of the treating physicians in consultation with their patients.”

- From The Brussels Times

The Great Barrington Declaration

A letter authored by 3 top epidemiologists and professors on October 4th, 2020, has, as of December 5, 2020, been signed by 12,597 Medical & Public Health Scientists and 35,547 Medical Practitioners. This is a portion of their consensus declaration:

"As infectious disease epidemiologists and public health scientists we have grave concerns about the damaging physical and mental health impacts of the prevailing COVID-19 policies, and recommend an approach we call Focused Protection."

Thus, "The most compassionate approach that balances the risks and benefits of reaching herd immunity, is to allow those who are at minimal risk of death to live their lives normally to build up immunity to the virus through natural infection, while better protecting those who are at highest risk. We call this Focused Protection."

Read the letter in full: <https://gbdeclaration.org/>

Forcing Children to Wear Face Masks is Unnecessary

Forcing children to wear facemasks in school is ineffective, harmful, and unnecessary. The risk of CoVID-19 in children is so low (see, “Masks are Unnecessary” above) that any imagined benefits cannot possibly outweigh the risks. Based on CDC data, the risk of children between the ages of zero and 19 years of age dying from CoVID-19 is an incredibly low risk of 0.00195%. This rate is much lower than the risk of children dying from influenza.

In fact, there is a large and growing body of physicians, pediatricians, scientists, epidemiologists, and researchers around the world that are speaking out against the anti-scientific public health recommendations that have been forced upon the public and our children.^[R] Those of us that have read the science have concluded that it is senseless and dangerous to force children to wear face masks in school:

- See e.g., Michelle Science MD, MSc, FRCPC, et. al., COVID-19: Guidance for School Reopening, Division of Infectious Diseases, The Hospital for Sick Children (“Sick Kids”), University of Toronto, Canada. <https://www.sickkids.ca/PDFs/About-SickKids/81407-COVID19-Recommendations-for-School> Reopening-SickKids.pdf
 - The use of [Non-Medical Masks (“NMMs”)] in the school setting should be driven by local epidemiology with age-specific considerations.
 - **When transmission in the community is low, the use of NMMs throughout the entire school day should not be mandatory for elementary, middle or high school students returning to school.**
 - Safe masking practices (e.g. proper wearing/storage/removal) should be reinforced with educational materials provided to parents, students and teachers.
 - **Given the current epidemiology, the use of NMMs is not recommended for elementary school students.**
- A Covid-19 cross-country study by the University of East Anglia in England found that a mask requirement was of no benefit and could even increase the risk of infection.
 - Hunter, et al., Impact of non-pharmaceutical interventions against COVID- 9 in Europe: a quasi-experimental study, May 6, 2020. <https://doi.org/10.1101/2020.05.01.20088260>
 - “We found that closure of education facilities, prohibiting mass gatherings and closure of some non-essential businesses were associated with reduced incidence whereas stay at home orders, closure of all non-businesses and requiring the wearing of face masks or coverings in public was not associated with any independent additional impact.”

Forcing Children to Wear Face Masks for Long Periods Risks Causing Them Physical Injuries.

The topic of the physical harms caused by masks was covered previously, but it is worth repeating a few of the key points:

Wearing a mask for more than a few minutes causes a significant reduction in a person’s blood oxygen level.

- See A. Beder, et al., Preliminary report on surgical mask induced deoxygenation during major surgery, Neurocirugía (2008). <http://scielo.isciii.es/pdf/neuro/v19n2/3.pdf>
- Transcranial Ultrasound Doppler (TCUD) studies on masked and unmasked individuals demonstrate the changes in blood flow in the brain the result from the arterial CO2

elevation that occurs within seconds of donning a mask.

- **This video demonstrates the use of TCUD and heart rate variability to measure the adverse effects of masking a healthy nine year old child:** <https://bit.ly/2GGQWiZ>

Wearing masks for extended periods increased incidences of headaches and negatively affected work performance.

- See Jonathan J.Y. Ong, et al., Headaches Associated With Personal Protective Equipment – A Cross-Sectional Study Among Frontline Healthcare Workers During COVID-19, Headache, the Journal of Head and Face Pain (May 2020).
<https://headachejournal.onlinelibrary.wiley.com/doi/full/10.1111/head.13811>

Most children wear cloth masks.

- See Brittany Dionne, How hard is it to find a medical grade face mask?, WBRC News, April 18, 2020. <https://www.wbrc.com/2020/04/18/how-hard-is-it-find-medical-grade-face-mask/>

But wearing a cloth mask may increase the risk of contracting Covid-19 and other respiratory infections.

- See MacIntyre CR, Seale H, Dung TC, et al., A cluster randomised trial of cloth masks compared with medical masks in healthcare workers, BMJ Open 2015; 5: e006577, US National Library of Medicine, National Institutes of Health, doi: 10.1136/bmjopen-2014-006577, April 22, 2015.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4420971/pdf/bmjopen-2014-006577.pdf>
 - “This study is the first [Randomly Controlled Trial] 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.”

Forcing Children to Wear Face Masks for Long Periods Risks Causing Them Mental and Psychological Injuries

Children are at risk for psychological trauma in multiple ways by being forced to wear face masks all day long at school. Doctors from around the country warn of the dangers to children of wearing face masks all day.

- See e.g., Jeffrey I. Barke, M.D., Open the schools without politics, American Thinker, June 10, 2020.
https://www.americanthinker.com/blog/2020/06/open_the_schools_without_politics.html

Mandatory face coverings on children is very harmful to the child: learning is inhibited; critical interactions among students and between student and teacher are fractured; and the face

covering is counterproductive, as kids will naturally touch their faces, thereby contaminating their covering. This new normal that many are advocating may well lead to a spike in childhood behavior problems such as learning disabilities, anxiety disorders, and depression, to name a few.

- See also Kathleen M. Pike, PhD, Why a Mask is Not Just a Mask, Global Mental Health Programs, Columbia University, April 17, 2020. <https://www.cugmhp.org/five-on-friday/why-a-mask-is-not-just-a-mask>

Many young children burst into tears or recoil when someone wearing a mask approaches. It's so common that some elementary schools prohibit masks at the school Halloween parade. One reason for this is that the development of facial recognition is relatively weak in young children. According to University of Toronto psychologist, Dr. Kang Lee, it is not until kids are about 14 years old that they reach adult skill levels in recognizing faces. Before then, kids tend to see individual facial features, rather than recognizing the person as a whole. By putting on masks, we take away information that makes it especially difficult for children to recognize others and read emotional signals, which is unsettling and disconcerting. These issues may be especially true for children with autism spectrum disorder, including Asperger's syndrome, who tend to have particular difficulties reading non-verbal cues.

Dr. Alice Kuo, President of the Southern California chapter of the American Academy of Pediatrics issued a statement criticizing Los Angeles County school reopening guidelines that require children wear masks as "not realistic or even developmentally appropriate for children." She explained that, "wearing masks throughout the day can hinder language and socio-emotional development, particularly for younger children."

Local Pediatricians Urge Collaborative Decision-Making About Reopening Schools, Southern California chapter of the American Academy of Pediatrics, June 2, 2020. <http://aapca2.org/wp-content/uploads/2020/06/AAP-CA2-press-release-on-schools-re-opening-6-2-20-Rev.pdf>

Some of the serious psychological harms to children caused by extended mask wearing are tied to lack of facial and emotional recognition.

- See Christiane Bormann-Kischkel, Face Recognition in Children, Eur Arch Psychiatr Neurol Sci (1986) 236: 17-20. <https://link.springer.com/article/10.1007/BF00641052>

The use of salient visual speech cues is hidden by masks making learning difficult for young children.

- Kaylah Lalondea and Rachael Frush Holta, Preschoolers Benefit From Visually Salient Speech Cues, Journal of Speech, Language, and Hearing Research, Vol. 58, 135–150, February 2015. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4712850/pdf/JSLHR-58-135.pdf>

- see also Martin Wegrzyn , et al., Mapping the emotional face. How individual face parts

contribute to successful emotion recognition, PLoS ONE 12(5): e0177239, May 11, 2017. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0177239>

- Lawrence Brancazio et al., Use of visual information in speech perception: Evidence for a visual rate effect both with and without a McGurk effect, Perception & Psychophysics 2005, 67 (5), 759-769. <https://pubmed.ncbi.nlm.nih.gov/16334050/>
- Mustapha Skhiri, Visual Cues in Speech Perception, Department of Computer and Information Science, Linköping University, GSLT, LiTH 20001/3/02. http://www.speech.kth.se/~rolf/gslt_papers/MustaphaSkiri.pdf

Voices of teachers and other students muffled through face masks makes learning more difficult, especially for any child with a diagnosed or undiagnosed hearing impairment.

- See Amanda B. Silberer, PhD, et al., Importance of High Frequency Audibility on Speech Recognition With and Without Visual Cues in Listeners with Normal Hearing, Department of Communication Sciences and Disorders The University of Iowa, March 2014. https://haar.lab.uiowa.edu/sites/haar.lab.uiowa.edu/files/wysiwyg_uploads/silberer_bentler_wu_aas_2014.pdf

The Center for Disease Control (“CDC”) has made clear that “Schools are an important part of the infrastructure of communities and play a critical role in supporting the whole child, not just their academic achievement.”

- See Preparing K-12 School Administrators for a Safe Return to School in Fall 2020. Guidance from the CDC to school Districts. https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/prepare-safe_return.html
- Nowhere in the guidance provided to local schools by the CDC is any information about compelling students to wear face masks. In fact, the CDC acknowledges that “[m]ore research and evaluation is needed on the implementation of mitigation strategies (e.g., social distancing, masks, hand hygiene, and use of cohorting) used in schools to determine which strategies are the most effective.” Id. at 5.

The lack of any such recommendation is understandable given that the great weight of scientific evidence shows unmistakably that wearing face masks for extended periods is harmful to people’s health, safety and emotional well-being, especially to young children.