



## Potential Harms of Face Coverings in Schools

This paper notes the potential harms of children wearing masks throughout the day.

### Impediment to children learning effectively

- Makes communication more difficult, reducing empathy and understanding and increasing detachment and anxiety.
- Creates a bad learning environment from effects including increased irritability (60%), headaches (53%), difficulty concentrating (50%), less happiness (49%), reluctance to go to school/kindergarten (44%), malaise (42%), impaired learning (38%) and drowsiness or fatigue (37%)
- No evidence presented to explain why the Government has changed its advice

### Physical harms

- Skin problems
- Eye problems
- Respiratory and heart problems

### Increase in contamination

- Bacterial contamination on masks, even when used correctly, increases when used by non-medical personnel.
- The risk increases with the length of time a mask is worn

### Psychological and social harms

- Increase in reports of anxiety, behavioural changes, and sleep disorders in children – particularly acute in pupils with SEN
- Concerns about social cohesion through issues around recognition and connections.

## IMPEDIMENT TO CHILDREN LEARNING EFFECTIVELY

### Peer-Reviewed Scientific Publications

Saunders, Jackson & Visram, 'Impacts of face coverings on communication: an indirect impact of COVID-19,' *International Journal of Audiology*, 27 November 2020

Face coverings had **“a profound impact on not only how we communicate, but on how connected we feel with someone, and how willing we are to engage in conversation...The face coverings increased anxiety and stress and made communication fatiguing, frustrating and embarrassing – both as a speaker wearing a face covering and when listening to someone else who is wearing one.” This study has revealed that face coverings have far-reaching impacts on communication for all individuals.** As expected, they impact people with hearing loss significantly more than those with normal hearing.

<https://www.tandfonline.com/doi/full/10.1080/14992027.2020.1851401>

Wong et al., 'Effect of facemasks on empathy and relational continuity: a randomised controlled trial in primary care,' *BMC family practice*, 24 December 2013

“Facemasks offer limited protection in preventing infection and aerosol transmission through mucous membranes (i.e. conjunctiva). **Meanwhile, a negative impact on the patient’s perceived empathy and relational continuity can reduce potential therapeutic effects** such as decreased depression, improved immune response, improved quality of life and improved health outcomes.”

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3879648/>

### Scientific Publications/Communications (Awaiting Review or Preprint or MedRxiv)

S. Schwartz, E. Janetzky et al., 'Corona children studies "Co-Ki": First results of a Germany-wide registry on mouth and nose covering (mask) in children,' December 2020

German registry of parent-reported complaints in children and adolescents caused by wearing a mask, data on over 25k individuals. Average wearing time was 270mins per day so less than is being proposed for UK secondary school children. Impairments caused by mask-wearing were reported by 68% of the parents, including irritability (60%), headache (53%), difficulty concentrating (50%), less happiness (49%), reluctance to go to school/kindergarten (44%), malaise (42%) impaired learning (38%) and drowsiness or fatigue (37%). This suggests that the wearing of face masks does not allow children to be at their best to learn.

<https://www.researchsquare.com/article/rs-124394/v1>

## Governmental/Institutional communication

‘Boris Johnson calls face masks in classrooms “nonsensical” hours after latest U-turn’, *Independent*, 26 August 2020

“[Wearing masks in classrooms] is nonsensical – **you can’t teach with face coverings; you can’t expect people to learn with face coverings.**”

<https://www.independent.co.uk/news/uk/politics/boris-johnson-face-masks-school-classroom-children-covid-19-a9689741.html>

‘Evidence for masks “not very strong in either direction” says Deputy Chief Medical Officer’, *Telegraph*, 28 August 2020

Prime Minister Boris Johnson insisted that he did not want to see face coverings in the classroom: “There’s no need for it. **Indeed, there’s a need not to have it because obviously, it’s very, very difficult to teach or to learn with a face mask on.**”

<https://www.telegraph.co.uk/news/2020/08/28/evidence-masks-not-strong-either-direction-says-deputy-chief/>

Department for Education, ‘Guidance: Face Coverings in Education’, 8 January 2021

“During national lockdown, in education settings where year 7 and above are educated, face coverings should be worn by adults (staff and visitors) and pupils when moving around indoors, such as in corridors and communal areas where social distancing is difficult to maintain. **As in the general approach, it will not usually be necessary to wear face coverings in the classroom, where protective measures already mean the risks are lower and they may inhibit teaching and learning.**

<https://www.gov.uk/government/publications/face-coverings-in-education/face-coverings-in-education>

*What has changed these statements? Is there new evidence to suggest that learning is not inhibited by face coverings in classrooms?*

Geoff Barton (General Secretary of the Association of School and College Leaders), Talk Radio interview, 24 February 2021

“I’m not sure that my ability to communicate and listen to and respond to those young people...possibly muttering behind their masks is going to be **conductive to educational standards.**”

<https://twitter.com/talkRADIO/status/1364505345402445826>

## PHYSICAL HARMS

### Peer-Reviewed Scientific Publications

#### Eye Problems

M. Moshirfar, W. West, D. Marx, 'Face Mask-Associated Ocular Irritation and Dryness', *Ophthalmology and Therapy*, September 2020

[Analysis of 'Mask Eye'] Air blowing upward from the mask into eyes likely accelerates the evaporation of the tear film which, **with prolonged mask use, may result in ocular surface irritation or inflammation**. This together with increasing eye rubbing and face touching due to discomfort from dry eyes create an **increased concern for ocular infections secondary to prolonged mask wear**. This risk is particularly worrisome during the current pandemic due to a well-documented probability of the novel coronavirus spreading through contact with the eye.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7362770/>

#### Skin Problems

Matusiak, Szepietowska, et al., 'Inconveniences due to the use of face masks during the COVID-19 pandemic: a survey study of 876 young people', *Dermatologic Therapy*, 29 June 2020

"Out of 876 participants, only 27 people (3.1%) did not complain of any problems related to face mask-wearing. Out of all reported inconveniences, **difficulty in breathing appeared to be the most common one (35.9%), followed by warming/sweating (21.3%), misting up of the glasses (21.3%), and slurred speech (12.3%)**. Interestingly, other skin bothersome reactions related to wearing of face masks were reported less often (itch-7.7%, skin irritation-0.9%)."

<https://onlinelibrary.wiley.com/doi/full/10.1111/dth.13567>

Yu, Li and Yang, 'A case of goggle-mask-related impetigo at the time of the COVID-19 pandemic', *Dermatologic Therapy*, May 2020

"Face coverings may also be associated with an **increased risk of bacterial skin infections, including impetigo, around the mouth**. This may be particularly distressing for children and teenagers, affecting their confidence and self-image."

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7280724/>

#### Respiratory and Heart Problems

Boris Borovoy, Colleen Huber, Q. Makeeta, 'Masks, false safety and real dangers, Part 1: Friable mask particulate and lung vulnerability,' *Primary Doctor Medical Journal*, September 2020

“If widespread masking continues, then the potential for inhaling mask fibers and environmental and biological debris continues on a daily basis for hundreds of millions of people. This should be alarming for physicians and epidemiologists knowledgeable in occupational hazards.”

Mask fibre friability has potential to cause **long-term detriment and short-term irritation**.

[https://pdmj.org/papers/masks\\_false\\_safety\\_and\\_real\\_dangers\\_part1/](https://pdmj.org/papers/masks_false_safety_and_real_dangers_part1/)

Chandrasekaran, Fernandes, ‘Exercise with facemask: are we handling a devil’s sword – a physiological hypothesis’, *Med Hypotheses*, 22 June 2020

Researchers are concerned about the possible burden of facemasks during physical activity on pulmonary, circulatory, and immune systems due to oxygen reduction and air trapping reducing substantial carbon dioxide exchange. As a result of hypercapnia, **there may be cardiac overload, renal overload, and a shift to metabolic acidosis**.

<https://pubmed.ncbi.nlm.nih.gov/32590322/>

E. Person, C. Lemerrier et al, ‘Effect of a surgical mask on six-minute walking distance’, *Rev Mal Respir*, March 2018

Surgical mask wearers had **significantly increased dyspnea (shortness of breath)** after a six-minute walk than non-wearers.

<https://pubmed.ncbi.nlm.nih.gov/29395560>

Li, Tokura, et al., ‘Effects of wearing N95 and surgical facemasks on heart rate, thermal stress and subjective sensations’, *International Archives of Occupational and Environmental Health*, May 2005

"It can be concluded that N95 and surgical facemasks **can induce significantly different temperatures and humidity in the microclimates of facemasks, which have profound influences on heart rate and thermal stress** and subjective perception of discomfort."

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7087880/>

Tong, Kale et al., ‘Respiratory consequences of N95-type mask usage in pregnant healthcare workers—a controlled clinical study’, *Antimicrobial Resistance and Infection Control*, April 2015

Breathing through N95 mask materials have been shown to impede gaseous exchange and impose an additional workload on the metabolic system of pregnant healthcare workers, and this needs to be taken into consideration in guidelines for respirator use.

<https://aricjournal.biomedcentral.com/articles/10.1186/s13756-015-0086-z>

Fikenzer, Uhe et al., 'Effects of surgical and FFP2/N95 face masks on cardiopulmonary exercise capacity', *Clinical Research in Cardiology*, July 2020

Ventilation, cardiopulmonary exercise capacity and comfort are reduced by surgical masks and highly impaired by FFP2/N95 face masks in healthy individuals.

<https://link.springer.com/article/10.1007/s00392-020-01704-y>

## Scientific Publications/Communications (Awaiting Review or Preprint or MedRxiv)

Prof. Carl Heneghan and Dr. Tom Jefferson, 'COVID 19 – Masks on or off?', Oxford Centre for Evidence-Based Medicine, 23 July 2020

"Evidence from 14 trials on the use of masks vs. no masks was disappointing: it showed no effect in either healthcare workers or in community settings...**It is often more difficult to breathe while wearing masks (particularly the respirator masks), which can exacerbate other health issues.**

An overview of 84 articles found that protective face masks also **negatively impact respiratory and dermal mechanisms of human thermoregulation**, making it hard for many to wear constantly. Thinking you're protected, means you may put yourself at higher risk...A mask can become **dirty with excessive moisture, and contaminated with airborne pathogens**. And because **your voice is muffled; individuals may have to get closer to people**, particularly the elderly, to hear from you."

<https://www.cebm.net/covid-19/covid-19-masks-on-or-off/>

## Government/Institutional Communication

'N95 Respirators, Surgical Masks, and Face Masks', US FDA website, accessed 22 Feb 2021

"Surgical masks are made in different thicknesses and with different ability to protect you from contact with liquids. These properties **may also affect how easily you can breathe** through the face mask."

<https://www.fda.gov/medical-devices/personal-protective-equipment-infection-control/n95-respirators-surgical-masks-and-face-masks#s7>



**World Health Organization, 'Mask use in the context of Covid-19, Interim Guidance', 1 December 2020**

**"Evidence on the protective effect of mask use in community settings: At present there is only limited and inconsistent scientific evidence to support the effectiveness** of masking of healthy people in the community to prevent infection with respiratory viruses, including SARS-CoV-2."

***"The potential disadvantages of mask use by healthy people in the general public include:***

- headache and/or breathing difficulties, depending on type of mask used;
- development of facial skin lesions, irritant dermatitis or worsening acne, when used frequently for long hours;
- difficulty with communicating clearly, especially for persons who are deaf or have poor hearing or use lip reading;
- discomfort;
- a false sense of security leading to potentially lower adherence to other critical preventive measures such as physical distancing and hand hygiene;
- poor compliance with mask wearing, in particular by young children;
- waste management issues; improper mask disposal leading to increased litter in public places and environmental hazards.
- disadvantages for or difficulty wearing masks, especially for children, developmentally challenged persons, those with mental illness, persons with cognitive impairment, those with asthma or chronic respiratory or breathing problems, those who have had facial trauma or recent oral maxillofacial surgery and those living in hot and humid environments."

[https://apps.who.int/iris/bitstream/handle/10665/337199/WHO-2019-nCov-IPC\\_Masks-2020.5-eng.pdf?sequence=1&isAllowed=y](https://apps.who.int/iris/bitstream/handle/10665/337199/WHO-2019-nCov-IPC_Masks-2020.5-eng.pdf?sequence=1&isAllowed=y)

**Norwegian Institute of Public Health, 'Should individuals in the community without respiratory symptoms wear facemasks to reduce the spread of COVID-19?', June 2020**

***"Undesirable effects – How substantial are the undesirable anticipated effects?"***

The undesirable effects of facemasks include the risks of incorrect use, a false sense of security (leading to relaxation of other interventions), and masks' contamination. Also, some people experience problems breathing, discomfort, and problems with communication. The proportion of people who experience these undesirable effects is uncertain. However, with a low prevalence of COVID-19, **the number of people who experience unwanted effects is likely to be much larger than the number of infections prevented."**

<https://www.fhi.no/globalassets/dokumenterfiler/rapporter/2020/should-individuals-in-the-community-without-respiratory-symptoms-wear-facemasks-to-reduce-the-spread-of-covid-19-report-2020.pdf>

## INCREASE IN CONTAMINATION

### Peer-Reviewed Scientific Publications

Zhiqing, Yongyun, et al, 'Surgical masks as source of bacterial contamination during operative procedures', *J Orthop Translat*, 27 June 2018

Surgical masks were found to be a repository of bacterial contamination. The source of the bacteria was the body surface of the surgeons rather than the operating room environment. Given that surgeons are gowned from head to foot for surgery, this should be especially concerning for lay people who wear masks. Without surgeons' protective garb, laypeople generally have even more exposed body surface to serve as sources for bacteria to collect on their masks. **The length of time a person is wearing a mask increases the bacterial load and risk of infection.**

<https://pubmed.ncbi.nlm.nih.gov/30035033/>

Luksamijarulkul, Aiempaditt, et al, 'Microbial Contamination on Used Surgical Masks among Hospital Personnel and Microbial Air Quality in their Working Wards: A Hospital in Bangkok', *Oman Medical Journal*, September 2014

Masks pick up the bacterial load present in the air around them. **"For its relationship, results found that bacterial and fungal counts in air samples showed significantly positive correlation with the bacterial contamination load on the outside area of the used masks."**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4202234/>

Chghtai, Stelkzer-Vraid, et al, 'Contamination by respiratory viruses on outer surface of medical masks used by hospital healthcare workers', June 2019

"Children are likely to wear masks incorrectly and touch their faces. The risk of potential self-contamination, especially with prolonged mask-wearing. Studies show masks worn by pre-symptomatic or mildly infected people may increase the risk of spreading disease, due to virus accumulation on the outer mask surface combined with touching the mask."

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6547584/>

### Governmental/Institutional communication

Swedish Public Health Agency website, accessed 4 December 2020

"The scientific evidence around the effectiveness of face masks in combatting the spread of infection is weak, which is why different countries have arrived at different recommendations....The Public Health Agency of Sweden does not recommend the general use of face masks, as a face mask that itches or slips down below the nose may mean a **person is regularly touching their mouth,**



**eyes or nose with their hands, which can increase the risk of the infection spreading.** Use of a facemask may also encourage people with mild symptoms to go out into the community, which might increase the spread of infection.”

<https://www.folkhalsomyndigheten.se>

## Concerns Expressed by Medical Professionals

**“Clear direction” needed on face coverings in schools, teaching union says', ITV News, 25 August 2020 (reporting about BBC Newsnight episode televised 24 August)**

SAGE member Professor Russell Viner said there was concern about younger children wearing face coverings. He told BBC2's Newsnight: “The evidence on masks is very unclear. And, actually, I think that's in one sense, potentially going beyond the evidence we have. There are lots of concerns about mask-wearing for children, particularly younger children. **Because they touch their face, they are constantly worried about the mask, it actually could, potentially, spread the virus more.** I think for young children it (would be) clear it is not a good idea. For teenagers, again, I think, we don't have the evidence this is useful.”

<https://www.itv.com/news/2020-08-24/keep-masks-in-schools-option-under-review-urges-education-union>

**Oxford University Professor of Evidence-Based Medicine Carl Heneghan, Special Committee on Covid-19 Response debate, 13 Aug 2020**

Heneghan says that the **evidence shows that cloth masks may actually increase your risk of infection**, and that uncertainty surrounding masks has divided opinion: “That is why we end up with people proposing them more and more. They say people should put them on in schools, pubs and shops. **However, there is no clear evidence. They use observational data to inform their decision.** If one looks at what has happened in the UK, for instance, it put masks in on 24 July. They were supposed to reduce the risk of infection by 40% over the next two weeks. In fact, infections detected have gone up. In effect, people are not looking at the evidence.”

[https://www.oireachtas.ie/en/debates/debate/special\\_committee\\_on\\_covid\\_19\\_response/2020-08-13/4/](https://www.oireachtas.ie/en/debates/debate/special_committee_on_covid_19_response/2020-08-13/4/)

**‘Coronavirus: Face masks could increase risk of infection, medical chief warns’, *Independent*, 12 March 2020**

Jenny Harries, deputy CMO told BBC News: “For the average member of the public walking down a street, it is not a good idea” to wear a face mask in the hope of preventing infection. “What tends to happen is people will have one mask. They won't wear it all the time; they will take it off when they get home,

they will put it down on a surface they haven't cleaned. Or they will be out and they haven't washed their hands, they will have a cup of coffee somewhere, they half hook it off, they wipe something over it. **In fact, you can actually trap the virus in the mask and start breathing it in.** Because of these behavioural issues, **people can adversely put themselves at more risk than less."**

<https://www.independent.co.uk/news/health/coronavirus-news-face-masks-increase-risk-infection-doctor-jenny-harries-a9396811.html>

*Where is the evidence to change from the concern about increasing infection rates through misuse?*

## PSYCHOLOGICAL AND SOCIAL HARMS

### Peer-Reviewed Scientific Publications

Carragher, Hancock, 'Surgical face masks impair human face matching performance for familiar and unfamiliar faces', *Cogn. Research*, 19 November 2020

"Our study shows that human performance on face matching tasks is significantly worse for faces wearing surgical masks, regardless of whether one, or both faces, are masked. Surprisingly, face masks caused a similar decrease in matching performance for familiar and unfamiliar faces...In conclusion, our study shows that both humans and naïve face recognition systems **have difficulty accurately matching faces that have been covered by surgical masks."**

<https://www.stir.ac.uk/news/2020/november-2020/new-study-reveals-impact-of-face-masks-on-person-identification/>

### Government/Institutional Communication

Sick Kids, The Hospital for Sick Children (Canada), 'COVID-19: Guidance for School Reopening', 29 July 2020

"Non-medical masks may reduce transmission from individuals who are shedding the virus. However, the extent of this benefit is unknown (especially in children) and would only be potentially beneficial if done properly. In fact, if worn incorrectly, it could lead to increased risk of infection and **it is not practical for a child to wear a mask properly for the duration of a school day...The addition of NMMs may increase anxiety, interfere with the therapeutic learning environment, and increase inattention or distraction in children and youth, particularly for those who may already struggle with attention, such as those with attention deficit hyperactivity disorder (ADHD) or other developmental disorders."**

<https://www.sickkids.ca/PDFs/About-SickKids/81407-COVID19-Recommendations-for-School-Reopening-SickKids.pdf>

## Concerns expressed by experts

MIND, 'Mask anxiety, face coverings and mental health', accessed 26 Feb. 2021

**"Masks are not easy for everyone.** Some of us may find covering our face very hard, or even impossible to cope with. Others may find it hard to interact with people who are wearing masks, or not wearing them. And for those of us with existing mental health problems, masks may pose extra challenges. Some challenges of wearing masks:

- You might feel **anxious or panicky**, as covering your mouth and nose might affect the air you breathe. This can cause symptoms like feeling **dizzy or sick**, which you may then associate with your mask.
- You might feel **trapped or claustrophobic**.
- Covering your face changes the way you look, which may cause **negative feelings around your identity or body image**.
- Certain materials touching your skin might feel very hard to cope with (which may create **sensory overload**).
- If you wear glasses, they might steam up so **you can't see clearly**. This might add to feeling **overwhelmed**.
- Seeing people with covered faces might make you feel **uneasy or scared of others**. They might seem threatening, sinister, or dehumanised.
- Masks are a **visual reminder of the virus**, so seeing masks might make you feel **on edge or unable to relax**. It might seem like danger is everywhere.
- Wearing or seeing people wear masks might **trigger a memory of a traumatic event**."

<https://www.mind.org.uk/information-support/coronavirus/mask-anxiety-face-coverings-and-mental-health/>

**'Mandatory masks in school are a "major threat" to children's development, doctors warn', *Brussels Times*, 9 September 2020**

The school face mask requirement is bad for children's general well-being and should be abolished, 70 doctors wrote in an open letter to the Flemish Education Minister. "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.** “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.”**

<https://www.brusselstimes.com/news/belgium-all-news/health/130480/face-mask-obligation-in-school-major-threat-to-childrens-development-doctors-say/>

**‘Rape survivors say they are being stigmatised for not wearing masks’, *Guardian*, 10 Aug. 2020**

“A significant proportion of rape survivors had their mouths or noses covered, or were choked or smothered, as part of the abuse and violence they experienced,” said Kate Russell, the national spokesperson for Rape Crisis England and Wales. “Covering their face and nose now can **trigger flashbacks, panic attacks and severe anxiety.**”

<https://www.theguardian.com/society/2020/aug/10/survivors-say-they-are-being-stigmatised-for-not-wearing-masks>

**‘Opinion: Domestic abuse survivors might be triggered by wearing a mask. They are allowed not to wear one’, *Independent*, 19 July 2020**

Masks can cause distress in victims of domestic and sexual violence.

<https://www.independent.co.uk/voices/face-mask-coronavirus-domestic-abuse-survivors-distress-mental-health-a9626766.html>

## About UsforThem

UsforThem believe children and young people are the pandemic’s forgotten victims. We are people from all walks of life who care about children. We are parents, grandparents, teachers, paediatricians, psychologists, lawyers - and many more besides. We have tens of thousands of members across the UK. We are independent, apolitical, and keen to work with others who have the same concerns and only interested in putting the needs of children first.