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The Health Harms and Risks of Face Masks

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Introduction

In debates about the putative benefits of facemasks, the harms and risks receive very little consideration.

Originally, facemasks were proposed as a temporary measure. Also, people were expected to wear them only for short times. Now, face masks are being mandated, for undefined periods of time, and for many hours a day. Very few studies of masks safety have been published since the beginning of masks wearing. The few studies that were published, and observational data shows very significant downsides of masks. That does not stop mask proponents from expanding the proposed mandates, not sparing even children.

Wearing facemasks might have been the first healthcare intervention in a half-century, introduced without any testing of its efficacy or safety. When proposing any new treatment or intervention, the top priority is to demonstrate safety; at least, to show that the risks are commensurate with its benefits. This was not done for facemasks.

Most people do not wear masks as surgeons and other healthcare workers are trained to do, or as written in the CDC recommendations. Masking mandates make misuse worse. The masks get soiled and contaminated. Children are more likely to have their masks contaminated. Wearing a dirty mask on one's face goes against basic hygienic principles. Since Pasteur, doctors have learned to avoid contamination. General mask wearing increases contamination and risk from random pathogens.

When a mask is worn for a short time, the main risks are dyspnea, self-infection, and potentially increased coronavirus spread to others (Goldstein, 2020). However, when face masks are worn for

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many hours a day, for extended periods (weeks or months), the new risks arise. Children are more vulnerable to them than adults – as opposite to risk from the coronavirus.

(Klompas et al., 2020), was published in April 2020, before mask wearing was politicized, expressed the common view among scientists that wearing masks outside healthcare settings offer no or very little protection, but efficacy of masks is out of the scope of this paper.

Multiple adverse effects

Here are some of the risk categories:

- Self-infection and spread of pathogens, other than SARS-COV-2, that contaminate the mask. The only study conducted on this subject has confirmed this danger (Chughtai et al., 2019).
- Skin irritations, acne, and dermatoses (Gomolin et al., 2020).
- Long term dyspnea, potentially leading to diseases increasing vulnerability to COVID-19 (Bakhit et al., 2021).
- Psychological damage to the wearer and people around him or her (Bakhit et al., 2021), especially for children
- Inhalation of plastic fibers and other pollutants from the masks (De-la-Torre et al., 2021).
- Self-infection and spread of SARS-COV-2.

Prior to COVID-19, this study: *Contamination by respiratory viruses on outer surface of medical masks used by hospital healthcare workers* (Chughtai et al., 2019), was conducted in China. The researchers tested worn masks only for respiratory viruses and only in upper sections of the masks. They found that 10% of the masks contained respiratory viruses: adenovirus, bocavirus, respiratory syncytial virus (RSV), and influenza virus. The study stressed that these pathogens on the masks can cause self-contamination. The study was performed in hospitals, a very clean environment, and among trained healthcare workers.

(CABRERA, 2021) provided an idea of what can be found in a normal, non-hospital environment, with a caveat that the testing was selective (i.e., non-scientific) and the study was published in a politically tinged publication. This caveat also applies to the majority of masking related papers and articles since May 2020.

Downsides of face masks and possible mitigation strategies: a systematic review and meta-analysis (Bakhit et al., 2021) found that there had been no studies measuring masks contamination and threat to the wearer, except for the mentioned (Chughtai et al., 2019).

(Bakhit et al., 2021) also found many negative psychological effects, from difficulty communicating, to fear of masked faces inspired in children. It also underscored that children have difficulty with both correct mask usage and adherence to masking requirements. As expected, the study also found a frequent lack of proper adherence to masking rules, even among healthcare workers.

(Bakhit et al., 2021) also found that masks cause difficulty breathing and other serious impacts, but many of these results were found in studies of N95 masks (respirators) and are therefore not directly applicable to general masking. The most important conclusion of the study was lack or shortage of data on downsides of the masks.

(Gomolin et al., 2020) points out how facemasks cause acne in general population and other facial dermatoses among healthcare workers, forced to wear them for long time. (Xerfan et al., 2021) mentioned significant increase in acne flares up, caused by masks wearing.

Further, a review of the literature cited by CDC officials to justify masks recommendations, has found invalidating errors in all studies favoring universal masking, misinterpretation of valid studies, and an omission of studies with conclusions against general masking (Goldstein, 2020).

Hazardous Materials in masks

Consumer-grade facemasks were never intended for long-term wear, or for children. Many facemasks contain and shed hazardous materials, according to the following studies:

Face mask—A potential source of phthalate exposure for human (Xie et al., 2021);

COVID-19 face masks: A new source of human and environmental exposure to organophosphate esters (Fernández-Arribas et al., 2021);

Investigating the current status of COVID-19 related plastics and their potential impact on human health (De-la-Torre et al., 2021), which describes microplastics and microfibers, coming off face masks, which are directly inhaled by the wearers.

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