

More than 170 Comparative Studies and Articles on Mask Ineffectiveness and Harms

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It is not unreasonable to conclude that surgical and cloth masks, used as they currently are being used (without other forms of PPE protection), have no impact on controlling the transmission of Covid-19 virus. Current evidence implies that face masks can be actually harmful. The body of evidence indicates that face masks are largely ineffective.

My focus is on COVID face masks and the prevailing science that we have had for nearly 20 months. Yet I wish to address this mask topic at a 50,000-foot level on the lockdown restrictive policies in general. I build on the backs of the fine work done by Gupta, Kulldorff, and Bhattacharya on the [Great Barrington Declaration \(GBD\)](#) and similar impetus by Dr. Scott Atlas (advisor to POTUS Trump) who, like myself, was a strong proponent for a focused type of protection that was based on an age-risk stratified approach.

Because we saw very early on that the lockdowns were the single greatest mistake in public health history. We knew the history and knew they would not work. We also knew very early of COVID's risk stratification. Sadly, our children will bear the [catastrophic consequences](#) and [not just educationally](#), of the [deeply flawed](#) school closure policy [for decades](#) to come ([particularly our minority children](#) who were least able to afford this). Many are still pressured to wear masks and punished for not doing so.

I present the masking 'body of evidence' below (n=167 studies and pieces of evidence), comprised of comparative effectiveness research as well as related evidence and high-level reporting. To date, the evidence has been stable and clear that masks do not work to control the virus and they can be harmful and especially to children.

Table 1: The evidence on COVID-19 face masks and mask mandates and harms

MASK-INEFFECTIVENESS	
1) Effectiveness of Adding a Mask Recommendation to Other Public Health Measures to Prevent SARS-CoV-2 Infection in Danish Mask Wearers, Bundgaard, 2021	"Infection with SARS-CoV-2 occurred in 42 participants recommended masks (1.8%) and 53 control participants (2.1%). The between-group difference was -0.3 percentage point (95% CI, -1.2 to 0.4 percentage point; P = 0.38) (odds ratio, 0.82 [CI, 0.54 to 1.23]; P = 0.33). Multiple imputation accounting for loss to follow-up yielded similar results...the recommendation to wear surgical masks to supplement other public health measures did not reduce the SARS-CoV-2 infection rate among wearers by more than 50% in a community with modest infection rates, some degree of social distancing, and uncommon general mask use."
2) SARS-CoV-2 Transmission among Marine Recruits during Quarantine, Letizia, 2020	"Our study showed that in a group of predominantly young male military recruits, approximately 2% became positive for SARS-CoV-2, as determined by qPCR assay, during a 2-week, strictly enforced quarantine. Multiple, independent virus strain transmission clusters

	<p>were identified...all recruits wore double-layered cloth masks at all times indoors and outdoors.”</p>
<p>3) Physical interventions to interrupt or reduce the spread of respiratory viruses, Jefferson, 2020</p>	<p>“There is low certainty evidence from nine trials (3507 participants) that wearing a mask may make little or no difference to the outcome of influenza-like illness (ILI) compared to not wearing a mask (risk ratio (RR) 0.99, 95% confidence interval (CI) 0.82 to 1.18. There is moderate certainty evidence that wearing a mask probably makes little or no difference to the outcome of laboratory-confirmed influenza compared to not wearing a mask (RR 0.91, 95% CI 0.66 to 1.26; 6 trials; 3005 participants)...the pooled results of randomised trials did not show a clear reduction in respiratory viral infection with the use of medical/surgical masks during seasonal influenza.”</p>
<p>4) The Impact of Community Masking on COVID-19: A Cluster-Randomized Trial in Bangladesh, Abaluck, 2021 Heneghan et al.</p>	<p>A cluster-randomized trial of community-level mask promotion in rural Bangladesh from November 2020 to April 2021 (N=600 villages, N=342,126 adults. Heneghan writes: “In a Bangladesh study, surgical masks reduced symptomatic COVID infections by between 0 and 22 percent, while the efficacy of cloth masks led to somewhere between an 11 percent increase to a 21 percent decrease. Hence, based on these randomized studies, adult masks appear to have either no or limited efficacy.”</p>
<p>5) Evidence for Community Cloth Face Masking to Limit the Spread of SARS-CoV-2: A Critical Review, Liu/CATO, 2021</p>	<p>“The available clinical evidence of facemask efficacy is of low quality and the best available clinical evidence has mostly failed to show efficacy, with fourteen of sixteen identified randomized controlled trials comparing face masks to no mask controls failing to find statistically significant benefit in the intent-to-treat populations. Of sixteen quantitative meta-analyses, eight were equivocal or critical as to whether evidence supports a public recommendation of masks, and the remaining eight supported a public mask intervention on limited evidence primarily on the basis of the precautionary principle.”</p>
<p>6) Nonpharmaceutical Measures for Pandemic Influenza in Nonhealthcare Settings—Personal Protective and Environmental Measures, CDC/Xiao, 2020</p>	<p>“Evidence from 14 randomized controlled trials of these measures did not support a substantial effect on transmission of laboratory-confirmed influenza...none of the household studies reported a significant reduction in secondary laboratory-confirmed influenza virus infections in the face mask group...the overall reduction in ILI or laboratory-confirmed influenza cases in the face mask group was not significant in either studies.”</p>
<p>7) CIDRAP: Masks-for-all for COVID-19 not based on sound data, Brosseau, 2020</p>	<p>“We agree that the data supporting the effectiveness of a cloth mask or face covering are very limited. We do, however, have data from laboratory studies that indicate cloth masks or face coverings offer very low filter collection efficiency for the smaller inhalable particles we believe are largely responsible for transmission, particularly from pre- or asymptomatic individuals who are not coughing or sneezing...though we support mask wearing by the general public, we continue to conclude that cloth masks and face coverings are likely to have limited impact on lowering COVID-19 transmission, because they have minimal ability to prevent the emission of small particles, offer limited personal protection with respect to small particle inhalation, and should not be recommended as a replacement for physical distancing or reducing time in enclosed spaces with many potentially infectious people.”</p>
<p>8) Universal Masking in Hospitals in the Covid-19 Era, Klompas/NEJM, 2020</p>	<p>“We know that wearing a mask outside health care facilities offers little, if any, protection from infection. Public health authorities</p>

	<p>define a significant exposure to Covid-19 as face-to-face contact within 6 feet with a patient with symptomatic Covid-19 that is sustained for at least a few minutes (and some say more than 10 minutes or even 30 minutes). The chance of catching Covid-19 from a passing interaction in a public space is therefore minimal. In many cases, the desire for widespread masking is a reflexive reaction to anxiety over the pandemic...The calculus may be different, however, in health care settings. First and foremost, a mask is a core component of the personal protective equipment (PPE) clinicians need when caring for symptomatic patients with respiratory viral infections, in conjunction with gown, gloves, and eye protection... universal masking alone is not a panacea. A mask will not protect providers caring for a patient with active Covid-19 if it's not accompanied by meticulous hand hygiene, eye protection, gloves, and a gown. A mask alone will not prevent health care workers with early Covid-19 from contaminating their hands and spreading the virus to patients and colleagues. Focusing on universal masking alone may, paradoxically, lead to more transmission of Covid-19 if it diverts attention from implementing more fundamental infection-control measures."</p>
9) Masks for prevention of viral respiratory infections among health care workers and the public: PEER umbrella systematic review, Dugré, 2020	<p>"This systematic review found limited evidence that the use of masks might reduce the risk of viral respiratory infections. In the community setting, a possible reduced risk of influenza-like illness was found among mask users. In health care workers, the results show no difference between N95 masks and surgical masks on the risk of confirmed influenza or other confirmed viral respiratory infections, although possible benefits from N95 masks were found for preventing influenza-like illness or other clinical respiratory infections. Surgical masks might be superior to cloth masks but data are limited to 1 trial."</p>
10) Effectiveness of personal protective measures in reducing pandemic influenza transmission: A systematic review and meta-analysis, Saunders-Hastings, 2017	<p>"Facemask use provided a non-significant protective effect (OR = 0.53; 95% CI 0.16–1.71; $I^2 = 48\%$) against 2009 pandemic influenza infection."</p>
11) Experimental investigation of indoor aerosol dispersion and accumulation in the context of COVID-19: Effects of masks and ventilation, Shah, 2021	<p>"Nevertheless, high-efficiency masks, such as the KN95, still offer substantially higher apparent filtration efficiencies (60% and 46% for R95 and KN95 masks, respectively) than the more commonly used cloth (10%) and surgical masks (12%), and therefore are still the recommended choice in mitigating airborne disease transmission indoors."</p>
12) Exercise with facemask; Are we handling a devil's sword?- A physiological hypothesis, Chandrasekaran, 2020	<p>"Exercising with facemasks may reduce available Oxygen and increase air trapping preventing substantial carbon dioxide exchange. The hypercapnic hypoxia may potentially increase acidic environment, cardiac overload, anaerobic metabolism and renal overload, which may substantially aggravate the underlying pathology of established chronic diseases. Further contrary to the earlier thought, no evidence exists to claim the facemasks during exercise offer additional protection from the droplet transfer of the virus."</p>
13) Surgical face masks in modern operating rooms—a costly and unnecessary ritual?, Mitchell, 1991	<p>"Following the commissioning of a new suite of operating rooms air movement studies showed a flow of air away from the operating table towards the periphery of the room. Oral microbial flora dispersed by unmasked male and female volunteers standing one</p>

	metre from the table failed to contaminate exposed settle plates placed on the table. The wearing of face masks by non-scrubbed staff working in an operating room with forced ventilation seems to be unnecessary.”
14) Facemask against viral respiratory infections among Hajj pilgrims: A challenging cluster-randomized trial, Alfelali, 2020	“By intention-to-treat analysis, facemask use did not seem to be effective against laboratory-confirmed viral respiratory infections (odds ratio [OR], 1.4; 95% confidence interval [CI], 0.9 to 2.1, $p = 0.18$) nor against clinical respiratory infection (OR, 1.1; 95% CI, 0.9 to 1.4, $p = 0.40$).”
15) Simple respiratory protection–evaluation of the filtration performance of cloth masks and common fabric materials against 20-1000 nm size particles, Rengasamy, 2010	“Results obtained in the study show that common fabric materials may provide marginal protection against nanoparticles including those in the size ranges of virus-containing particles in exhaled breath.”
16) Respiratory performance offered by N95 respirators and surgical masks: human subject evaluation with NaCl aerosol representing bacterial and viral particle size range, Lee, 2008	“The study indicates that N95 filtering facepiece respirators may not achieve the expected protection level against bacteria and viruses. An exhalation valve on the N95 respirator does not affect the respiratory protection; it appears to be an appropriate alternative to reduce the breathing resistance.”
17) Aerosol penetration and leakage characteristics of masks used in the health care industry, Weber, 1993	“We conclude that the protection provided by surgical masks may be insufficient in environments containing potentially hazardous sub-micrometer-sized aerosols.”
18) Disposable surgical face masks for preventing surgical wound infection in clean surgery, Vincent, 2016	“We included three trials, involving a total of 2106 participants. There was no statistically significant difference in infection rates between the masked and unmasked group in any of the trials...from the limited results it is unclear whether the wearing of surgical face masks by members of the surgical team has any impact on surgical wound infection rates for patients undergoing clean surgery.”
19) Disposable surgical face masks: a systematic review, Lipp, 2005	“From the limited results it is unclear whether wearing surgical face masks results in any harm or benefit to the patient undergoing clean surgery.”
20) Comparison of the Filter Efficiency of Medical Nonwoven Fabrics against Three Different Microbe Aerosols, Shimasaki, 2018	“We conclude that the filter efficiency test using the phi-X174 phage aerosol may overestimate the protective performance of nonwoven fabrics with filter structure compared to that against real pathogens such as the influenza virus.”
21) The use of masks and respirators to prevent transmission of influenza: a systematic review of the scientific evidence 21) The use of masks and respirators to prevent transmission of influenza: a systematic review of the scientific evidence, Bin-Reza, 2012	The use of masks and respirators to prevent transmission of influenza: a systematic review of the scientific evidence “None of the studies established a conclusive relationship between mask/respirator use and protection against influenza infection. Some evidence suggests that mask use is best undertaken as part of a package of personal protection especially hand hygiene.”
22) Facial protection for healthcare workers during pandemics: a scoping review, Godoy, 2020	“Compared with surgical masks, N95 respirators perform better in laboratory testing, may provide superior protection in inpatient settings and perform equivalently in outpatient settings. Surgical mask and N95 respirator conservation strategies include extended use, reuse or decontamination, but these strategies may result in inferior protection. Limited evidence suggests that reused and improvised masks should be used when medical-grade protection is unavailable.”

23) Assessment of Proficiency of N95 Mask Donning Among the General Public in Singapore, Yeung, 2020	“These findings support ongoing recommendations against the use of N95 masks by the general public during the COVID-19 pandemic. ⁵ N95 mask use by the general public may not translate into effective protection but instead provide false reassurance. Beyond N95 masks, proficiency among the general public in donning surgical masks needs to be assessed.”
24) Evaluating the efficacy of cloth facemasks in reducing particulate matter exposure, Shakya, 2017	“Standard N95 mask performance was used as a control to compare the results with cloth masks, and our results suggest that cloth masks are only marginally beneficial in protecting individuals from particles<2.5 µm.”
25) Use of surgical face masks to reduce the incidence of the common cold among health care workers in Japan: a randomized controlled trial, Jacobs, 2009	“Face mask use in health care workers has not been demonstrated to provide benefit in terms of cold symptoms or getting colds.”
26) N95 Respirators vs Medical Masks for Preventing Influenza Among Health Care Personnel, Radonovich, 2019	“Among outpatient health care personnel, N95 respirators vs medical masks as worn by participants in this trial resulted in no significant difference in the incidence of laboratory-confirmed influenza.”
27) Does Universal Mask Wearing Decrease or Increase the Spread of COVID-19?, Watts up with that? 2020	“A survey of peer-reviewed studies shows that universal mask wearing (as opposed to wearing masks in specific settings) does not decrease the transmission of respiratory viruses from people wearing masks to people who are not wearing masks.”
28) Masking: A Careful Review of the Evidence, Alexander, 2021	“In fact, it is not unreasonable at this time to conclude that surgical and cloth masks, used as they currently are, have absolutely no impact on controlling the transmission of Covid-19 virus, and current evidence implies that face masks can be actually harmful.”
29) Community and Close Contact Exposures Associated with COVID-19 Among Symptomatic Adults ≥18 Years in 11 Outpatient Health Care Facilities — United States, July 2020, Fisher, 2020	Reported characteristics of symptomatic adults ≥18 years who were outpatients in 11 US academic health care facilities and who received positive and negative SARS-CoV-2 test results (N = 314)* — United States, July 1–29, 2020, revealed that 80% of infected persons wore face masks almost all or most of the time .
30) Impact of non-pharmaceutical interventions against COVID-19 in Europe: a quasi-experimental study, Hunter, 2020	Face masks in public was not associated with reduced incidence.
31) Masking lack of evidence with politics, CEBM, Heneghan, 2020	“It would appear that despite two decades of pandemic preparedness, there is considerable uncertainty as to the value of wearing masks. For instance, high rates of infection with cloth masks could be due to harms caused by cloth masks, or benefits of medical masks. The numerous systematic reviews that have been recently published all include the same evidence base so unsurprisingly broadly reach the same conclusions.”
32) Transmission of COVID-19 in 282 clusters in Catalonia, Spain: a cohort study, Marks, 2021	“We observed no association of risk of transmission with reported mask usage by contacts, with the age or sex of the index case, or with the presence of respiratory symptoms in the index case at the initial study visit.”
33) Non-pharmaceutical public health measures for mitigating the risk and impact of epidemic and pandemic influenza, WHO, 2020	“Ten RCTs were included in the meta-analysis, and there was no evidence that face masks are effective in reducing transmission of laboratory-confirmed influenza.”

34) <i>The Strangely Unscientific Masking of America</i> , Younes, 2020	“One report reached its conclusion based on observations of a “dummy head attached to a breathing simulator.” Another analyzed use of surgical masks on people experiencing at least two symptoms of acute respiratory illness. Incidentally, not one of these studies involved cloth masks or accounted for real-world mask usage (or misuse) among lay people, and none established efficacy of widespread mask-wearing by people not exhibiting symptoms. There was simply no evidence whatsoever that healthy people ought to wear masks when going about their lives, especially outdoors.”
35) <i>Facemasks and similar barriers to prevent respiratory illness such as COVID-19: A rapid systematic review</i> , Brainard, 2020	“31 eligible studies (including 12 RCTs). Narrative synthesis and random-effects meta-analysis of attack rates for primary and secondary prevention in 28 studies were performed. Based on the RCTs we would conclude that wearing facemasks can be very slightly protective against primary infection from casual community contact, and modestly protective against household infections when both infected and uninfected members wear facemasks. However, the RCTs often suffered from poor compliance and controls using facemasks.”
36) <i>The Year of Disguises</i> , Koops, 2020	“The healthy people in our society should not be punished for being healthy, which is exactly what lockdowns, distancing, mask mandates, etc. do...Children should not be wearing face coverings. We all need constant interaction with our environments and that is especially true for children. This is how their immune system develops. They are the lowest of the low-risk groups. Let them be kids and let them develop their immune systems... The “Mask Mandate” idea is a truly ridiculous, knee-jerk reaction and needs to be withdrawn and thrown in the waste bin of disastrous policy, along with lockdowns and school closures. You can vote for a person without blindly supporting all of their proposals!”
37) <i>Open Schools, Covid-19, and Child and Teacher Morbidity in Sweden</i> , Ludvigsson, 2020	“1,951,905 children in Sweden (as of December 31, 2019) who were 1 to 16 years of age, were examined...social distancing was encouraged in Sweden, but wearing face masks was not...No child with Covid-19 died.”
38) <i>Double-Masking Benefits Are Limited, Japan Supercomputer Finds</i> , Reidy, 2021	“Wearing two masks offers limited benefits in preventing the spread of droplets that could carry the coronavirus compared to one well-fitted disposable mask, according to a Japanese study that modeled the dispersal of droplets on a supercomputer.”
39) <i>Physical interventions to interrupt or reduce the spread of respiratory viruses. Part 1 – Face masks, eye protection and person distancing: systematic review and meta-analysis</i> , Jefferson, 2020	“There was insufficient evidence to provide a recommendation on the use of facial barriers without other measures. We found insufficient evidence for a difference between surgical masks and N95 respirators and limited evidence to support effectiveness of quarantine.”
40) <i>Should individuals in the community without respiratory symptoms wear facemasks to reduce the spread of COVID-19?</i> , NIPH, 2020	“Non-medical facemasks include a variety of products. There is no reliable evidence of the effectiveness of non-medical facemasks in community settings. There is likely to be substantial variation in effectiveness between products. However, there is only limited evidence from laboratory studies of potential differences in effectiveness when different products are used in the community.”
41) <i>Is a mask necessary in the operating theatre?</i> , Orr, 1981	“It would appear that minimum contamination can best be achieved by not wearing a mask at all but operating in silence. Whatever its relation to contamination, bacterial counts, or the dissemination of

	squames, there is no direct evidence that the wearing of masks reduces wound infection.”
42) The surgical mask is a bad fit for risk reduction, Neilson, 2016	“As recently as 2010, the US National Academy of Sciences declared that, in the community setting, “face masks are not designed or certified to protect the wearer from exposure to respiratory hazards.” A number of studies have shown the inefficacy of the surgical mask in household settings to prevent transmission of the influenza virus.”
43) Facemask versus No Facemask in Preventing Viral Respiratory Infections During Hajj: A Cluster Randomised Open Label Trial, Alfelali, 2019	“Facemask use does not prevent clinical or laboratory-confirmed viral respiratory infections among Hajj pilgrims.”
44) Facemasks in the COVID-19 era: A health hypothesis, Vainshelboim, 2021	“The existing scientific evidences challenge the safety and efficacy of wearing facemask as preventive intervention for COVID-19. 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. Wearing facemasks has been demonstrated to have substantial adverse physiological and psychological effects. These include hypoxia, hypercapnia, shortness of breath, increased acidity and toxicity, activation of fear and stress response, rise in stress hormones, immunosuppression, fatigue, headaches, decline in cognitive performance, predisposition for viral and infectious illnesses, chronic stress, anxiety and depression.”
45) The use of masks and respirators to prevent transmission of influenza: a systematic review of the scientific evidence, Bin-Reza, 2011	“None of the studies established a conclusive relationship between mask/respirator use and protection against influenza infection. Some evidence suggests that mask use is best undertaken as part of a package of personal protection especially hand hygiene.”
46) Are Face Masks Effective? The Evidence., Swiss Policy Research, 2021	“Most studies found little to no evidence for the effectiveness of face masks in the general population, neither as personal protective equipment nor as a source control.”
47) Postoperative wound infections and surgical face masks: A controlled study, Tunevall, 1991	“These results indicate that the use of face masks might be reconsidered. Masks may be used to protect the operating team from drops of infected blood and from airborne infections, but have not been proven to protect the patient operated by a healthy operating team.”
48) Mask mandate and use efficacy in state-level COVID-19 containment, Guerra, 2021	“Mask mandates and use are not associated with slower state-level COVID-19 spread during COVID-19 growth surges.”
49) Twenty Reasons Mandatory Face Masks are Unsafe, Ineffective and Immoral, Manley, 2021	“A CDC-funded review on masking in May 2020 came to the conclusion: “Although mechanistic studies support the potential effect of hand hygiene or face masks, evidence from 14 randomized controlled trials of these measures did not support a substantial effect on transmission of laboratory-confirmed influenza... None of the household studies reported a significant reduction in secondary laboratory-confirmed influenza virus infections in the face mask group.” If masks can't stop the regular flu, how can they stop SAR-CoV-2?”
50) A cluster randomised trial of cloth masks compared with medical masks in healthcare workers, MacIntyre, 2015	“First RCT of cloth masks, and the results caution against the use of cloth masks. This is an important finding to inform occupational health and safety. Moisture retention, reuse of cloth masks and poor filtration may result in increased risk of infection...the rates of all infection outcomes were highest in the cloth mask arm, with the rate

	<p>of ILI statistically significantly higher in the cloth mask arm (relative risk (RR)=13.00, 95% CI 1.69 to 100.07) compared with the medical mask arm. Cloth masks also had significantly higher rates of ILI compared with the control arm. An analysis by mask use showed ILI (RR=6.64, 95% CI 1.45 to 28.65) and laboratory-confirmed virus (RR=1.72, 95% CI 1.01 to 2.94) were significantly higher in the cloth masks group compared with the medical masks group. Penetration of cloth masks by particles was almost 97% and medical masks 44%.”</p>
<p>51) Horowitz: Data from India continues to blow up the ‘Delta’ fear narrative, Blazemedi, 2021</p>	<p>“Rather than proving the need to sow more panic, fear, and control over people, the story from India — the source of the “Delta” variant — continues to refute every current premise of COVID fascism... Masks failed to stop the spread there.”</p>
<p>52) An outbreak caused by the SARS-CoV-2 Delta variant (B.1.617.2) in a secondary care hospital in Finland, May 2021, Hetemäki, 2021</p>	<p>Reporting on a nosocomial hospital outbreak in Finland, Hetemäli et al. observed that “both symptomatic and asymptomatic infections were found among vaccinated health care workers, and secondary transmission occurred from those with symptomatic infections despite use of personal protective equipment.”</p>
<p>53) Nosocomial outbreak caused by the SARS-CoV-2 Delta variant in a highly vaccinated population, Israel, July 2021, Shitrit, 2021</p>	<p>In a hospital outbreak investigation in Israel, Shitrit et al. observed “high transmissibility of the SARS-CoV-2 Delta variant among twice vaccinated and masked individuals.” They added that “this suggests some waning of immunity, albeit still providing protection for individuals without comorbidities.” Again, despite use of personal protective equipment.</p>
<p>54) 47 studies confirm ineffectiveness of masks for COVID and 32 more confirm their negative health effects, Lifesite news staff, 2021</p>	<p>“No studies were needed to justify this practice since most understood viruses were far too small to be stopped by the wearing of most masks, other than sophisticated ones designed for that task and which were too costly and complicated for the general public to properly wear and keep changing or cleaning. It was also understood that long mask wearing was unhealthy for wearers for common sense and basic science reasons.”</p>
<p>55) Are EUA Face Masks Effective in Slowing the Spread of a Viral Infection?, Dopp, 2021</p>	<p>The vast evidence shows that masks are ineffective.</p>
<p>56) CDC Study finds overwhelming majority of people getting coronavirus wore masks, Boyd/Federalist, 2021</p>	<p>“A Centers for Disease Control report released in September shows that masks and face coverings are not effective in preventing the spread of COVID-19, even for those people who consistently wear them.”</p>
<p>57) Most Mask Studies Are Garbage, Eugyppius, 2021</p>	<p>“The other kind of study, the proper kind, would be a randomised controlled trial. You compare the rates of infection in a masked cohort against rates of infection in an unmasked cohort. Here things have gone much, much worse for mask brigade. They spent months trying to prevent the publication of the Danish randomised controlled trial, which found that masks do zero. When that paper finally squeaked into print, they spent more months trying desperately to poke holes in it. You could feel their boundless relief when the Bangladesh study finally appeared to save them in early September. Every last Twitter blue-check could now proclaim that Science Shows Masks Work. Such was their hunger for any scrap of evidence to prop up their prior convictions, that none of them noticed the sad nature of the Science in question. The study found a mere 10% reduction in seroprevalence among the masked cohort, an effect so small that it fell within the confidence interval. Even the</p>

	study authors couldn't exclude the possibility that masks in fact do zero."
58) Using face masks in the community: first update, ECDC, 2021	"No high-quality evidence in favor of face masks and recommended their use only based on the 'precautionary principle.'"
59) Do physical measures such as hand-washing or wearing masks stop or slow down the spread of respiratory viruses?, Cochrane, 2020	"Seven studies took place in the community, and two studies in healthcare workers. Compared with wearing no mask, wearing a mask may make little to no difference in how many people caught a flu-like illness (9 studies; 3507 people); and probably makes no difference in how many people have flu confirmed by a laboratory test (6 studies; 3005 people). Unwanted effects were rarely reported, but included discomfort."
60) Mouth-nose protection in public: No evidence of effectiveness, Thieme/Kappstein, 2020	"The use of masks in public spaces is questionable simply because of the lack of scientific data. If one also considers the necessary precautions, masks must even be considered a risk of infection in public spaces according to the rules known from hospitals... If masks are worn by the population, the risk of infection is potentially increased, regardless of whether they are medical masks or whether they are so-called community masks designed in any way. If one considers the precautionary measures that the RKI as well as the international health authorities have pronounced, all authorities would even have to inform the population that masks should not be worn in public spaces at all. Because no matter whether it is a duty for all citizens or voluntarily borne by the citizens who want it for whatever reason, it remains a fact that masks can do more harm than good in public."
61) US mask guidance for kids is the strictest across the world, Skelding, 2021	"Kids need to see faces," Jay Bhattacharya, a professor of medicine at Stanford University, told The Post. Youngsters watch people's mouths to learn to speak, read and understand emotions, he said. "We have this idea that this disease is so bad that we must adopt any means necessary to stop it from spreading," he said. "It's not that masks in schools have no costs. They actually do have substantial costs."
62) Masking young children in school harms language acquisition, Walsh, 2021	"This is important because children and/or students do not have the speech or language ability that adults have — they are not equally able and the ability to see the face and especially the mouth is critical to language acquisition which children and/or students are engaged in at all times. Furthermore, the ability to see the mouth is not only essential to communication but also essential to brain development."
63) The Case Against Masks for Children, Makary, 2021	<p>"It's abusive to force kids who struggle with them to sacrifice for the sake of unvaccinated adults... Do masks reduce Covid transmission in children? Believe it or not, we could find only a single retrospective study on the question, and its results were inconclusive. Yet two weeks ago the Centers for Disease Control and Prevention sternly decreed that 56 million U.S. children and adolescents, vaccinated or not, should cover their faces regardless of the prevalence of infection in their community. Authorities in many places took the cue to impose mandates in schools and elsewhere, on the theory that masks can't do any harm. That isn't true. Some children are fine wearing a mask, but others struggle. Those who have myopia can have difficulty seeing because the mask fogs their glasses. (This has long been a problem for medical students in the operating room.)</p> <p>Masks can cause severe acne and other skin problems. The discomfort of a mask distracts some children from learning. By increasing airway resistance during exhalation, masks can lead to</p>

	increased levels of carbon dioxide in the blood. And masks can be vectors for pathogens if they become moist or are used for too long.”
64) Face Covering Mandates , Peavey, 2021	“Face Covering Mandates And Why They AREN’T Effective.”
65) Do masks work? A Review of the evidence , Anderson, 2021	“In truth, the CDC’s, U.K.’s, and WHO’s earlier guidance was much more consistent with the best medical research on masks’ effectiveness in preventing the spread of viruses. That research suggests that Americans’ many months of mask-wearing has likely provided little to no health benefit and might even have been counterproductive in preventing the spread of the novel coronavirus.”
66) Most face masks won’t stop COVID-19 indoors, study warns , Anderer, 2021	“New research reveals that cloth masks filter just 10% of exhaled aerosols, with many people not wearing coverings that fit their face properly.”
67) How face masks and lockdowns failed/the face mask folly in retrospect , Swiss Policy Research, 2021	“Mask mandates and lockdowns have had no discernible impact.”
68) CDC Releases School COVID Transmission Study But Buries One of the Most Damning Parts , Davis, 2021	“The 21% lower incidence in schools that required mask use among students was not statistically significant compared with schools where mask use was optional... With tens of millions of American kids headed back to school in the fall, their parents and political leaders owe it to them to have a clear-sighted, scientifically rigorous discussion about which anti-COVID measures actually work and which might put an extra burden on vulnerable young people without meaningfully or demonstrably slowing the spread of the virus...that a masking requirement of students failed to show independent benefit is a finding of consequence and great interest.”
69) World Health Organization internal meeting, COVID-19 – virtual press conference – 30 March 2020 , 2020	“This is a question on Austria. The Austrian Government has a desire to make everyone wear a mask who’s going into the shops. I understood from our previous briefings with you that the general public should not wear masks because they are in short supply. What do you say about the new Austrian measures?... I’m not specifically aware of that measure in Austria. I would assume that it’s aimed at people who potentially have the disease not passing it to others. In general WHO recommends that the wearing of a mask by a member of the public is to prevent that individual giving the disease to somebody else. We don’t generally recommend the wearing to masks in public by otherwise well individuals because it has not been up to now associated with any particular benefit.”
70) Face masks to prevent transmission of influenza virus: a systematic review , Cowling, 2010	“Review highlights the limited evidence base supporting the efficacy or effectiveness of face masks to reduce influenza virus transmission.”“None of the studies reviewed showed a benefit from wearing a mask, in either HCW or community members in households (H) .”
71) Effectiveness of N95 respirators versus surgical masks in protecting health care workers from acute respiratory infection: a systematic review and meta-analysis , Smith, 2016	“Although N95 respirators appeared to have a protective advantage over surgical masks in laboratory settings, our meta-analysis showed that there were insufficient data to determine definitively whether N95 respirators are superior to surgical masks in protecting health care workers against transmissible acute respiratory infections in clinical settings.”

72) Effectiveness of Masks and Respirators Against Respiratory Infections in Healthcare Workers: A Systematic Review and Meta-Analysis, Offeddu, 2017	<p>“We found evidence to support universal medical mask use in hospital settings as part of infection control measures to reduce the risk of CRI and ILI among HCWs. Overall, N95 respirators may convey greater protection, but universal use throughout a work shift is likely to be less acceptable due to greater discomfort...Our analysis confirms the effectiveness of medical masks and respirators against SARS. Disposable, cotton, or paper masks are not recommended. The confirmed effectiveness of medical masks is crucially important for lower-resource and emergency settings lacking access to N95 respirators. In such cases, single-use medical masks are preferable to cloth masks, for which there is no evidence of protection and which might facilitate transmission of pathogens when used repeatedly without adequate sterilization...We found no clear benefit of either medical masks or N95 respirators against pH1N1...Overall, the evidence to inform policies on mask use in HCWs is poor, with a small number of studies that is prone to reporting biases and lack of statistical power.”</p>
73) N95 Respirators vs Medical Masks for Preventing Influenza Among Health Care Personnel, Radonovich, 2019	<p>“Use of N95 respirators, compared with medical masks, in the outpatient setting resulted in no significant difference in the rates of laboratory-confirmed influenza.”</p>
Effectiveness of N95 respirators versus surgical masks against influenza: A systematic review and meta-analysis74) Masks Don't Work: A Review of Science Relevant to COVID-19 Social Policy, Rancourt, 2020	<p>The use of N95 respirators compared with surgical masks is not associated with a lower risk of laboratory-confirmed influenza. It suggests that N95 respirators should not be recommended for general public and nonhigh-risk medical staff those are not in close contact with influenza patients or suspected patients. “No RCT study with verified outcome shows a benefit for HCW or community members in households to wearing a mask or respirator. There is no such study. There are no exceptions. Likewise, no study exists that shows a benefit from a broad policy to wear masks in public (more on this below). Furthermore, if there were any benefit to wearing a mask, because of the blocking power against droplets and aerosol particles, then there should be more benefit from wearing a respirator (N95) compared to a surgical mask, yet several large meta-analyses, and all the RCT, prove that there is no such relative benefit.”</p>
75) More Than a Dozen Credible Medical Studies Prove Face Masks Do Not Work Even In Hospitals!, Firstenberg, 2020	<p>“Mandating masks has not kept death rates down anywhere. The 20 U.S. states that have never ordered people to wear face masks indoors and out have dramatically lower COVID-19 death rates than the 30 states that have mandated masks. Most of the no-mask states have COVID-19 death rates below 20 per 100,000 population, and none have a death rate higher than 55. All 13 states that have death rates higher than 55 are states that have required the wearing of masks in all public places. It has not protected them.”</p>
76) Does evidence based medicine support the effectiveness of surgical facemasks in preventing postoperative wound infections in elective surgery?, Bahli, 2009	<p>“From the limited randomized trials it is still not clear that whether wearing surgical face masks harms or benefit the patients undergoing elective surgery.”</p>
77) Peritonitis prevention in CAPD: to mask or not?, Figueiredo, 2000	<p>“The current study suggests that routine use of face masks during CAPD bag exchanges may be unnecessary and could be discontinued.”</p>
78) The operating room environment as affected by people and the surgical face mask, Ritter, 1975	<p>“The wearing of a surgical face mask had no effect upon the overall operating room environmental contamination and probably work only to redirect the projectile effect of talking and breathing. People</p>

	are the major source of environmental contamination in the operating room.”
79) The efficacy of standard surgical face masks: an investigation using “tracer particles, Ha’eri, 1980	“Particle contamination of the wound was demonstrated in all experiments. Since the microspheres were not identified on the exterior of these face masks, they must have escaped around the mask edges and found their way into the wound.”
80) Wearing of caps and masks not necessary during cardiac catheterization, Laslett, 1989	“Prospectively evaluated the experience of 504 patients undergoing percutaneous left heart catheterization, seeking evidence of a relationship between whether caps and/or masks were worn by the operators and the incidence of infection. No infections were found in any patient, regardless of whether a cap or mask was used. Thus, we found no evidence that caps or masks need to be worn during percutaneous cardiac catheterization.”
81) Do anaesthetists need to wear surgical masks in the operating theatre? A literature review with evidence-based recommendations, Skinner, 2001	“A questionnaire-based survey, undertaken by Leyland’ in 1993 to assess attitudes to the use of masks, showed that 20% of surgeons discarded surgical masks for endoscopic work. Less than 50% did not wear the mask as recommended by the Medical Research Council. Equal numbers of surgeons wore the mask in the belief they were protecting themselves and the patient, with 20% of these admitting that tradition was the only reason for wearing them.”
82) Mask mandates for children are not backed by data, Faria, 2021	“Even if you want to use the 2018-19 flu season to avoid overlap with the start of the COVID-19 pandemic, the CDC paints a similar picture: It estimated 480 flu deaths among children during that period, with 46,000 hospitalizations. COVID-19, mercifully, is simply not as deadly for children. According to the American Academy of Pediatrics, preliminary data from 45 states show that between 0.00%-0.03% of child COVID-19 cases resulted in death. When you combine these numbers with the CDC study that found mask mandates for students — along with hybrid models, social distancing, and classroom barriers — did not have a statistically significant benefit in preventing the spread of COVID-19 in schools, the insistence that we force students to jump through these hoops for their own protection makes no sense.”
83) The Downsides of Masking Young Students Are Real, Prasad, 2021	“The benefits of mask requirements in schools might seem self-evident—they have to help contain the coronavirus, right?—but that may not be so. In Spain, masks are used in kids ages 6 and older. The authors of one study there examined the risk of viral spread at all ages. If masks provided a large benefit, then the transmission rate among 5-year-olds would be far higher than the rate among 6-year-olds. The results don't show that . Instead, they show that transmission rates, which were low among the youngest kids, steadily increased with age—rather than dropping sharply for older children subject to the face-covering requirement. This suggests that masking kids in school does not provide a major benefit and might provide none at all. And yet many officials prefer to double down on masking mandates, as if the fundamental policy were sound and only the people have failed.”
84) Masks In Schools: Scientific American Fumbles Report On Childhood COVID Transmission, English/ACSH, 2021	“Masking is a low-risk, inexpensive intervention. If we want to recommend it as a precautionary measure, especially in situations where vaccination isn’t an option, great. But that’s not what the public has been told. “Florida governor Ron DeSantis and politicians in Texas say research does not support mask mandates,” SciAm’s sub-headline bellowed. “Many studies show they are wrong.”If that’s the

	<p>case, demonstrate that the intervention works before you mandate its use in schools. If you can't, acknowledged what UC San Francisco hematologist-oncologist and Associate Professor of Epidemiology Vinay Prasad wrote over at the Atlantic: "No scientific consensus exists about the wisdom of mandatory-masking rules for schoolchildren ... In mid-March 2020, few could argue against erring on the side of caution. But nearly 18 months later, we owe it to children and their parents to answer the question properly: Do the benefits of masking kids in school outweigh the downsides? The honest answer in 2021 remains that we don't know for sure."</p>
<p>85) Masks 'don't work,' are damaging health and are being used to control population: Doctors panel, Haynes, 2021</p>	<p>"The only randomized control studies that have ever been done on masks show that they don't work," began Dr. Nepute. He referred to Dr. Anthony Fauci's "noble lie," in which Fauci "changed his tune," from his March 2020 comments, where he downplayed the need and efficacy of mask wearing, before urging Americans to use masks later in the year. "Well, he lied to us. So if he lied about that, what else has he lied to you about?" questioned Nepute. Masks have become commonplace in almost every setting, whether indoors or outdoors, but Dr. Popper mentioned how there have been "no studies" which actually examine the "effect of wearing a mask during all your waking hours." "There's no science to back any of this and particularly no science to back the fact that wearing a mask twenty four-seven or every waking minute, is health promoting," added Popper."</p>
<p>86) Aerosol penetration through surgical masks, Chen, 1992</p>	<p>"The mask that has the highest collection efficiency is not necessarily the best mask from the perspective of the filter-quality factor, which considers not only the capture efficiency but also the air resistance. Although surgical mask media may be adequate to remove bacteria exhaled or expelled by health care workers, they may not be sufficient to remove the sub-micrometer-sized aerosols containing pathogens to which these health care workers are potentially exposed."</p>
<p>87) CDC: Schools With Mask Mandates Didn't See Statistically Significant Different Rates of COVID Transmission From Schools With Optional Policies, Miltimore, 2021</p>	<p>"The CDC did not include its finding that "required mask use among students was not statistically significant compared with schools where mask use was optional" in the summary of its report."</p>
<p>88) Horowitz: Data from India continues to blow up the 'Delta' fear narrative, Howorwitz, 2021</p>	<p>"Rather than proving the need to sow more panic, fear, and control over people, the story from India — the source of the "Delta" variant — continues to refute every current premise of COVID fascism... Unless we do that, we must return to the very effective lockdowns and masks. In reality, India's experience proves the opposite true; namely: 1) Delta is largely an attenuated version, with a much lower fatality rate, that for most people is akin to a cold. 2) Masks failed to stop the spread there. 3) The country has come close to the herd immunity threshold with just 3% vaccinated.</p>
<p>89) Transmission of SARS-CoV-2 Delta Variant Among Vaccinated Healthcare Workers, Vietnam, Chau, 2021</p>	<p>While not definitive in the LANCET publication, it can be inferred that the nurses were all masked up and had PPE etc. as was the case in Finland and Israel nosocomial outbreaks, indicating the failure of PPE and masks to constrain Delta spread.</p>
<p>90) Aerosol penetration through surgical masks, Willeke, 1992</p>	<p>"The mask that has the highest collection efficiency is not necessarily the best mask from the perspective of the filter-quality factor, which considers not only the capture efficiency but also the air resistance. Although surgical mask media may be adequate to remove bacteria exhaled or expelled by health care workers, they may not be</p>

	sufficient to remove the submicrometer-size aerosols containing pathogens to which these health care workers are potentially exposed.”
91) The efficacy of standard surgical face masks: an investigation using “tracer particles”, Wiley, 1980	“Particle contamination of the wound was demonstrated in all experiments. Since the microspheres were not identified on the exterior of these face masks, they must have escaped around the mask edges and found their way into the wound. The wearing of the mask beneath the headgear curtails this route of contamination.”
92) An Evidence Based Scientific Analysis of Why Masks are Ineffective, Unnecessary, and Harmful, Meehan, 2020	“Decades of the highest-level scientific evidence (meta-analyses of multiple randomized controlled trials) overwhelmingly conclude that medical masks are ineffective at preventing the transmission of respiratory viruses, including SAR-CoV-2...those arguing for masks are relying on low-level evidence (observational retrospective trials and mechanistic theories), none of which are powered to counter the evidence, arguments, and risks of mask mandates.”
93) Open Letter from Medical Doctors and Health Professionals to All Belgian Authorities and All Belgian Media, AIER, 2020	“Oral masks in healthy individuals are ineffective against the spread of viral infections.”
94) Effectiveness of N95 respirators versus surgical masks against influenza: A systematic review and meta-analysis, Long, 2020	“The use of N95 respirators compared with surgical masks is not associated with a lower risk of laboratory-confirmed influenza. It suggests that N95 respirators should not be recommended for general public and nonhigh-risk medical staff those are not in close contact with influenza patients or suspected patients.”
95) Advice on the use of masks in the context of COVID-19, WHO, 2020	“However, the use of a mask alone is insufficient to provide an adequate level of protection or source control, and other personal and community level measures should also be adopted to suppress transmission of respiratory viruses.”
96) Farce mask: it's safe for only 20 minutes, The Sydney Morning Herald, 2003	“Health authorities have warned that surgical masks may not be an effective protection against the virus.”Those masks are only effective so long as they are dry,” said Professor Yvonne Cossart of the Department of Infectious Diseases at the University of Sydney.”As soon as they become saturated with the moisture in your breath they stop doing their job and pass on the droplets.”Professor Cossart said that could take as little as 15 or 20 minutes, after which the mask would need to be changed. But those warnings haven’t stopped people snapping up the masks, with retailers reporting they are having trouble keeping up with demand.”
97) Study: Wearing A Used Mask Is Potentially Riskier Than No Mask At All, Boyd, 2020 Effects of mask-wearing on the inhalability and deposition of airborne SARS-CoV-2 aerosols in human upper airway	“According to researchers from the University of Massachusetts Lowell and California Baptist University, a three-layer surgical mask is 65 percent efficient in filtering particles in the air. That effectiveness, however, falls to 25 percent once it is used.”It is natural to think that wearing a mask, no matter new or old, should always be better than nothing,” said author Jinxiang Xi.“Our results show that this belief is only true for particles larger than 5 micrometers, but not for fine particles smaller than 2.5 micrometers,” he continued.”
98) Unravelling the Role of the Mandatory Use of Face Covering Masks for the Control of SARS-CoV-2 in Schools: A Quasi-Experimental Study Nested in a Population-Based Cohort in Catalonia (Spain), Coma, 2022	“A recent study (Catalonia, Spain) done on face masks and their effectiveness was a retrospective population-based study among near 600,000 children aged 3 to 11 years attending preschool (3-5 years, without facial covering mandate) and primary education (6-11 years, with facial covering mandate); to assess the incidence of SARS-CoV-2, secondary attack rates (SAR) and the effective reproductive

	<p>number (R^*) for each grade during the first trimester of the 2021-2022 academic year, including an analysis of the differences between 5-year-old, without facial covering mandate, and 6 year-old children, with mandate.</p> <p>Researchers found that “the SARS-CoV-2 incidence was significantly lower in preschool than in primary education, and an age-dependent trend was observed. Children aged 3 and 4 showed lower outcomes for all the analyzed epidemiological variables, while children aged 11 had the higher values. Six-year-old children showed higher incidence than 5 year-olds (3-54% vs 3-1%; OR: 1-15 [95%CI: 1-08-1-22]) and slightly lower but not statistically significant SAR and R^*: SAR were 4-36% in 6 year-old children, and 4-59% in 5 year-old (IRR: 0-96 [95%CI: 0-82-1-11]); and R^* was 0-9 and 0-93 (OR: 0-96 [95%CI: 0-87-1-09]), respectively.” Overall, facial covering mandates (face masks) in examined schools were not linked to lower SARS-CoV-2 incidence or spread, implying that these masks were not effective.”</p>
99) Correlation Between Mask Compliance and COVID-19 Outcomes in Europe, Spira, 2022	<p>“The aim of this short study was to analyse the correlation between mask usage against morbidity and mortality rates in the 2020-2021 winter in Europe. Data from 35 European countries on morbidity, mortality, and mask usage during a six-month period were analysed and crossed. Mask usage was more homogeneous in Eastern Europe than in Western European countries. Spearman’s correlation coefficients between mask usage and COVID-19 outcomes were either null or positive, depending on the subgroup of countries and type of outcome (cases or deaths). Positive correlations were stronger in Western than in Eastern European countries. These findings indicate that countries with high levels of mask compliance did not perform better than those with low mask usage.”</p>
100) The Foegen effect A mechanism by which facemasks contribute to the COVID-19 case fatality rate, Fögen, 2022	<p>“The most important finding from this study is that contrary to the accepted thought that fewer people are dying because infection rates are reduced by masks, this was not the case. Results from this study strongly suggest that mask mandates actually caused about 1.5 times the number of deaths or ~50% more deaths compared to no mask mandates. This means that the risk for the individual wearing the mask should even be higher, because there is an unknown number of people in MMC who either do not obey mask mandates, are exempted for medical reasons or do not go to public places where mask mandates are in effect. These people do not have an increased risk and thus the risk on the other people under a mask mandate is actually higher.”</p>
101) Association between School Mask Mandates and SARS-CoV-2 Student Infections: Evidence from a Natural Experiment of Neighboring K-12 Districts in North Dakota, Sood & Høeg, 2022	<p>Unique study “of two adjacent K-12 school districts in Fargo, North Dakota, one which had a mask mandate and one which did not in the fall of the 2021-2022 academic year. In the winter, both districts adopted a masks-optional policy allowing for a partial crossover study design. We observed no significant difference between student case rates while the districts had differing masking policies (IRR 0.99; 95% CI: 0.92 to 1.07) nor while they had the same mask policies (IRR 1.04; 95% CI: 0.92 to 1.16). The IRRs across the two periods were also not significantly different ($p = 0.40$).” Researchers concluded that school-based mask mandates have “limited to no impact on the case rates of COVID-19 among K-12 students.”</p>
102) Medical Masks Versus N95 Respirators for Preventing COVID-19 Among Health Care Workers, Loeb, 2022	<p>Researchers found that both the surgical masks and the N95 fitted COVID masks do not stop infection as in both trial arms (non-inferiority multi-center trial), participants got infected; moreover,</p>

	<p>there was no difference between the surgical masks and the N95 fitted masks in terms of stopping infection. “In the intention-to-treat analysis, RT-PCR–confirmed COVID-19 occurred in 52 of 497 (10.46%) participants in the medical mask group versus 47 of 507 (9.27%) in the N95 respirator group (hazard ratio [HR], 1.14 [95% CI, 0.77 to 1.69]). There were 47 (10.8%) adverse events related to the intervention reported in the medical mask group and 59 (13.6%) in the N95 respirator group.”</p>
<p>103) Lack of correlation between school mask mandates and paediatric COVID-19 cases in a large cohort, Chandra, 2022</p>	<p>“Successfully replicated the original result using 565 counties; non-masking counties had around 30 additional daily cases per 100,000 children after two weeks of schools reopening. However, after nine weeks, cases per 100,000 were 18.3 in counties with mandates compared to 15.8 in those without them ($p = 0.12$). In a larger sample of 1832 counties, between weeks 2 and 9, cases per 100,000 fell by 38.2 and 37.9 in counties with and without mask requirements, respectively ($p = 0.93$). The association between school mask mandates and cases did not persist in the extended sample. Observational studies of interventions are prone to multiple biases and provide insufficient evidence for recommending mask mandates.”</p>
<p>104) Physical interventions to interrupt or reduce the spread of respiratory viruses (Review), Jefferson, 2023</p>	<p>Ten studies took place in the community, and two studies in healthcare workers. Compared with wearing no mask in the community studies only, wearing a mask may make little to no difference in how many people caught a flu-like illness/COVID-like illness (9 studies; 276,917 people); and probably makes little or no difference in how many people have flu/COVID confirmed by a laboratory test (6 studies; 13,919 people). Unwanted effects were rarely reported; discomfort was mentioned.</p> <p>N95/P2 respirators</p> <p>Four studies were in healthcare workers, and one small study was in the community. Compared with wearing medical or surgical masks, wearing N95/P2 respirators probably makes little to no difference in how many people have confirmed flu (5 studies; 8407 people); and may make little to no difference in how many people catch a flu-like illness (5 studies; 8407 people), or respiratory illness (3 studies; 7799 people). Unwanted effects were not well-reported; discomfort was mentioned.</p>
MASK MANDATES	
<p>1) Mask mandate and use efficacy for COVID-19 containment in US States, Guerra, 2021</p>	<p>“Calculated total COVID-19 case growth and mask use for the continental United States with data from the Centers for Disease Control and Prevention and Institute for Health Metrics and Evaluation. We estimated post-mask mandate case growth in non-mandate states using median issuance dates of neighboring states with mandates...did not observe association between mask mandates or use and reduced COVID-19 spread in US states.”</p>
<p>2) These 12 Graphs Show Mask Mandates Do Nothing To Stop COVID, Weiss, 2020</p>	<p>“Masks can work well when they’re fully sealed, properly fitted, changed often, and have a filter designed for virus-sized particles. This represents none of the common masks available on the consumer market, making universal masking much more of a confidence trick than a medical solution...Our universal use of unscientific face coverings is therefore closer to medieval superstition than it is to science, but many powerful institutions have</p>

	<p>too much political capital invested in the mask narrative at this point, so the dogma is perpetuated. The narrative says that if cases go down it's because masks succeeded. It says that if cases go up it's because masks succeeded in preventing more cases. The narrative simply assumes rather than proves that masks work, despite overwhelming scientific evidence to the contrary."</p>
<p>3) Mask Mandates Seem to Make CCP Virus Infection Rates Climb, Study Says, Vadum, 2020</p>	<p>"Protective-mask mandates aimed at combating the spread of the CCP virus that causes the disease COVID-19 appear to promote its spread, according to a report from RationalGround.com, a clearinghouse of COVID-19 data trends that's run by a grassroots group of data analysts, computer scientists, and actuaries."</p>
<p>4) Horowitz: Comprehensive analysis of 50 states shows greater spread with mask mandates, Howorwitz, 2020 Justin Hart</p>	<p>"How long do our politicians get to ignore the results?... The results: When comparing states with mandates vs. those without, or periods of times within a state with a mandate vs. without, there is absolutely no evidence the mask mandate worked to slow the spread one iota. In total, in the states that had a mandate in effect, there were 9,605,256 confirmed COVID cases over 5,907 total days, an average of 27 cases per 100,000 per day. When states did not have a statewide order (which includes the states that never had them and the period of time masking states did not have the mandate in place) there were 5,781,716 cases over 5,772 total days, averaging 17 cases per 100,000 people per day."</p>
<p>5) The CDC's Mask Mandate Study: Debunked, Alexander, 2021</p>	<p>"Thus, it is not surprising that the CDC's own recent conclusion on the use of nonpharmaceutical measures such as face masks in pandemic influenza, warned that scientific "evidence from 14 randomized controlled trials of these measures did not support a substantial effect on transmission..." Moreover, in the WHO's 2019 guidance document on nonpharmaceutical public health measures in a pandemic, they reported as to face masks that "there is no evidence that this is effective in reducing transmission..." Similarly, in the fine print to a recent double-blind, double-masking simulation the CDC stated that "The findings of these simulations [supporting mask usage] should neither be generalized to the effectiveness ...nor interpreted as being representative of the effectiveness of these masks when worn in real-world settings."</p>
<p>6) Phil Kerpin, tweet, 2021 The Spectator</p>	<p>"The first ecological study of state mask mandates and use to include winter data: "Case growth was independent of mandates at low and high rates of community spread, and mask use did not predict case growth during the Summer or Fall-Winter waves."</p>
<p>7) How face masks and lockdowns failed, SPR, 2021</p>	<p>"Infections have been driven primarily by seasonal and endemic factors, whereas mask mandates and lockdowns have had no discernible impact"</p>
<p>8) Analysis of the Effects of COVID-19 Mask Mandates on Hospital Resource Consumption and Mortality at the County Level, Schauer, 2021</p>	<p>"There was no reduction in per-population daily mortality, hospital bed, ICU bed, or ventilator occupancy of COVID-19-positive patients attributable to the implementation of a mask-wearing mandate."</p>
<p>9) Do we need mask mandates, Harris, 2021</p>	<p>"But masks proved far less useful in the subsequent 1918 Spanish flu, a viral disease spread by pathogens smaller than bacteria. California's Department of Health, for instance, reported that the cities of Stockton, which required masks, and Boston, which did not, had scarcely different death rates, and so advised against mask mandates except for a few high-risk professions such as barbers....Randomized</p>

	<p>controlled trials (RCTs) on mask use, generally more reliable than observational studies, though not infallible, typically show that cloth and surgical masks offer little protection. A few RCTs suggest that perfect adherence to an exacting mask protocol may guard against influenza, but meta-analyses find little on the whole to suggest that masks offer meaningful protection. WHO guidelines from 2019 on influenza say that despite “mechanistic plausibility for the potential effectiveness” of masks, studies showed a benefit too small to be established with any certainty. Another literature review by researchers from the University of Hong Kong agrees. Its best estimate for the protective effect of surgical masks against influenza, based on ten RCTs published through 2018, was just 22 percent, and it could not rule out zero effect.”</p>
MASK HARMS	
<p>1) Corona children studies: Co-Ki: First results of a German-wide registry on mouth and nose covering (mask) in children, Schwarz, 2021</p>	<p>“The average wearing time of the mask was 270 minutes per day. Impairments caused by wearing the mask were reported by 68% of the parents. These included 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%).”</p>
<p>2) Dangerous pathogens found on children's face masks, Cabrera, 2021</p>	<p>“Masks were contaminated with bacteria, parasites, and fungi, including three with dangerous pathogenic and pneumonia-causing bacteria.”</p>
<p>3) Masks, false safety and real dangers, Part 2: Microbial challenges from masks, Borovoy, 2020/2021</p>	<p>“Laboratory testing of used masks from 20 train commuters revealed that 11 of the 20 masks tested contained over 100,000 bacterial colonies. Molds and yeasts were also found. Three of the masks contained more than one million bacterial colonies... The outside surfaces of surgical masks were found to have high levels of the following microbes, even in hospitals, more concentrated on the outside of masks than in the environment. Staphylococcus species (57%) and Pseudomonas spp (38%) were predominant among bacteria, and Penicillium spp (39%) and Aspergillus spp. (31%) were the predominant fungi.”</p>
<p>4) Preliminary report on surgical mask induced deoxygenation during major surgery, Beder, 2008</p>	<p>“Considering our findings, pulse rates of the surgeon's increase and SpO2 decrease after the first hour. This early change in SpO2 may be either due to the facial mask or the operational stress. Since a very small decrease in saturation at this level, reflects a large decrease in PaO2, our findings may have a clinical value for the health workers and the surgeons.”</p>
<p>5) Mask mandates may affect a child's emotional, intellectual development, Gillis, 2020</p>	<p>“The thing is we really don't know for sure what the effect may or may not be. But what we do know is that children, especially in early childhood, they use the mouth as part of the entire face to get a sense of what's going on around them in terms of adults and other people in their environment as far as their emotions. It also has a role in language development as well... If you think about an infant, when you interact with them you use part of your mouth. They are interested in your facial expressions. And if you think about that part of the face being covered up, there is that possibility that it could have an effect. But we don't know because this is really an unprecedented time. What we wonder about is if this could play a role and how can we stop it if it would affect child development.”</p>

6) Headaches and the N95 face-mask amongst healthcare providers, Lim, 2006	“Healthcare providers may develop headaches following the use of the N95 face-mask.”
7) Maximizing Fit for Cloth and Medical Procedure Masks to Improve Performance and Reduce SARS-CoV-2 Transmission and Exposure, 2021, Brooks, 2021	“Although use of double masking or knotting and tucking are two of many options that can optimize fit and enhance mask performance for source control and for wearer protection, double masking might impede breathing or obstruct peripheral vision for some wearers, and knotting and tucking can change the shape of the mask such that it no longer covers fully both the nose and the mouth of persons with larger faces.”
8) Facemasks in the COVID-19 era: A health hypothesis, Vainshelboim, 2021	“Wearing facemasks has been demonstrated to have substantial adverse physiological and psychological effects. These include hypoxia, hypercapnia, shortness of breath, increased acidity and toxicity, activation of fear and stress response, rise in stress hormones, immunosuppression, fatigue, headaches, decline in cognitive performance, predisposition for viral and infectious illnesses, chronic stress, anxiety and depression.”
9) Wearing a mask can expose children to dangerous levels of carbon dioxide in just THREE MINUTES, study finds, Shaheen/Daily Mail, 2021	“European study found that children wearing masks for only minutes could be exposed to dangerous carbon dioxide levels...Forty-five children were exposed to carbon dioxide levels between three to twelve times healthy levels.”
10) How many children must die? Shilhavy, 2020	“How long are parents going to continue masking their children causing great harm to them, even to the point of risking their lives? Dr. Eric Nepute in St. Louis took time to record a video rant that he wants everyone to share, after the 4-year-old child of one of his patients almost died from a bacterial lung infection caused by prolonged mask use.”
11) Medical Doctor Warns that “Bacterial Pneumonias Are on the Rise” from Mask Wearing, Meehan, 2021	“I’m seeing patients that have facial rashes, fungal infections, bacterial infections. Reports coming from my colleagues, all over the world, are suggesting that the bacterial pneumonias are on the rise... Why might that be? Because untrained members of the public are wearing medical masks, repeatedly... in a non-sterile fashion... They’re becoming contaminated. They’re pulling them off of their car seat, off the rear-view mirror, out of their pocket, from their countertop, and they’re reapplying a mask that should be worn fresh and sterile every single time.”
12) Open Letter from Medical Doctors and Health Professionals to All Belgian Authorities and All Belgian Media, AIER, 2020	“Wearing a mask is not without side effects. Oxygen deficiency (headache, nausea, fatigue, loss of concentration) occurs fairly quickly, an effect similar to altitude sickness. Every day we now see patients complaining of headaches, sinus problems, respiratory problems and hyperventilation due to wearing masks. In addition, the accumulated CO ₂ leads to a toxic acidification of the organism which affects our immunity. Some experts even warn of an increased transmission of the virus in case of inappropriate use of the mask.”
13) Face coverings for covid-19: from medical intervention to social practice, Peters, 2020	“At present, there is no direct evidence (from studies on Covid19 and in healthy people in the community) on the effectiveness of universal masking of healthy people in the community to prevent infection with respiratory viruses, including Covid19. Contamination of the upper respiratory tract by viruses and bacteria on the outside of medical face masks has been detected in several hospitals. Another research shows that a moist mask is a breeding ground for (antibiotic resistant) bacteria and fungi, which can undermine mucosal viral immunity. This research advocates the use of medical / surgical

	<p>masks (instead of homemade cotton masks) that are used once and replaced after a few hours.”</p>
<p>14) Face masks for the public during the covid-19 crisis, Lazzarino, 2020</p>	<p>“The two potential side effects that have already been acknowledged are: (1) Wearing a face mask may give a false sense of security and make people adopt a reduction in compliance with other infection control measures, including social distancing and hands washing. (2) Inappropriate use of face mask: people must not touch their masks, must change their single-use masks frequently or wash them regularly, dispose them correctly and adopt other management measures, otherwise their risks and those of others may increase. Other potential side effects that we must consider are: (3) The quality and the volume of speech between two people wearing masks is considerably compromised and they may unconsciously come closer. While one may be trained to counteract side effect n.1, this side effect may be more difficult to tackle. (4) Wearing a face mask makes the exhaled air go into the eyes. This generates an uncomfortable feeling and an impulse to touch your eyes. If your hands are contaminated, you are infecting yourself.”</p>
<p>15) Contamination by respiratory viruses on outer surface of medical masks used by hospital healthcare workers, Chughtai, 2019</p>	<p>“Respiratory pathogens on the outer surface of the used medical masks may result in self-contamination. The risk is higher with longer duration of mask use (>6 h) and with higher rates of clinical contact. Protocols on duration of mask use should specify a maximum time of continuous use, and should consider guidance in high contact settings.”</p>
<p>16) Reusability of Facemasks During an Influenza Pandemic, Bailar, 2006</p>	<p>“After considering all the testimony and other information we received, the committee concluded that there is currently no simple, reliable way to decontaminate these devices and enable people to use them safely more than once. There is relatively little data available about how effective these devices are against flu even the first time they are used. To the extent they can help at all, they must be used correctly, and the best respirator or mask will do little to protect a person who uses it incorrectly. Substantial research must be done to increase our understanding of how flu spreads, to develop better masks and respirators, and to make it easier to decontaminate them. Finally, the use of face coverings is only one of many strategies that will be needed to slow or halt a pandemic, and people should not engage in activities that would increase their risk of exposure to flu just because they have a mask or respirator.”</p>
<p>17) Exhalation of respiratory viruses by breathing, coughing, and talking, Stelzer-Braid, 2009</p>	<p>“The exhaled aerosols generated by coughing, talking, and breathing were sampled in 50 subjects using a novel mask, and analyzed using PCR for nine respiratory viruses. The exhaled samples from a subset of 10 subjects who were PCR positive for rhinovirus were also examined by cell culture for this virus. Of the 50 subjects, among the 33 with symptoms of upper respiratory tract infections, 21 had at least one virus detected by PCR, while amongst the 17 asymptomatic subjects, 4 had a virus detected by PCR. Overall, rhinovirus was detected in 19 subjects, influenza in 4 subjects, parainfluenza in 2 subjects, and human metapneumovirus in 1 subject. Two subjects were co-infected. Of the 25 subjects who had virus-positive nasal mucus, the same virus type was detected in 12 breathing samples, 8 talking samples, and in 2 coughing samples. In the subset of exhaled samples from 10 subjects examined by culture, infective rhinovirus was detected in 2.”</p>

18) [Effect of a surgical mask on six minute walking distance], Person, 2018	“Wearing a surgical mask modifies significantly and clinically dyspnea without influencing walked distance.”
19) Protective masks reduce resilience, Science ORF, 2020	“The German researchers used two types of face masks for their study – surgical masks and so-called FFP2 masks, which are mainly used by medical personnel. The measurements were carried out with the help of spiroergometry, in which patients or in this case the test persons exert themselves physically on a stationary bicycle – a so-called ergometer – or a treadmill. The subjects were examined without a mask, with surgical masks and with FFP2 masks. The masks therefore impair breathing, especially the volume and the highest possible speed of the air when exhaling. The maximum possible force on the ergometer was significantly reduced.”
20) Wearing masks even more unhealthy than expected, Corona transition, 2020	“They contain microplastics – and they exacerbate the waste problem...”Many of them are made of polyester and so you have a microplastic problem.” Many of the face masks would contain polyester with chlorine compounds: “If I have the mask in front of my face, then of course I breathe in the microplastic directly and these substances are much more toxic than if you swallow them, as they get directly into the nervous system,” Braungart continues.”
21) Masking Children: Tragic, Unscientific, and Damaging, Alexander, 2021	“Children do not readily acquire SARS-CoV-2 (very low risk), spread it to other children or teachers, or endanger parents or others at home. This is the settled science. In the rare cases where a child contracts Covid virus it is very unusual for the child to get severely ill or die. Masking can do positive harm to children – as it can to some adults. But the cost benefit analysis is entirely different for adults and children – particularly younger children. Whatever arguments there may be for consenting adults – children should not be required to wear masks to prevent the spread of Covid-19. Of course, zero risk is not attainable – with or without masks, vaccines, therapeutics, distancing or anything else medicine may develop or government agencies may impose.”
22) The Dangers of Masks, Alexander, 2021	“With that clarion call, we pivot and refer here to another looming concern and this is the potential danger of the chlorine, polyester, and microplastic components of the face masks (surgical principally but any of the mass-produced masks) that have become part of our daily lives due to the Covid-19 pandemic. We hope those with persuasive power in the government will listen to this plea. We hope that the necessary decisions will be made to reduce the risk to our populations.”
23) 13-year-old mask wearer dies for inexplicable reasons, Corona Transition, 2020	“The case is not only causing speculation in Germany about possible poisoning with carbon dioxide. Because the student “was wearing a corona protective mask when she suddenly collapsed and died a little later in the hospital,” writes Wochenblick.Editor’s Review: The fact that no cause of death was communicated nearly three weeks after the girl’s death is indeed unusual. The carbon dioxide content of the air is usually about 0.04 percent. From a proportion of four percent, the first symptoms of hypercapnia, i.e. carbon dioxide poisoning, appear. If the proportion of the gas rises to more than 20 percent, there is a risk of deadly carbon dioxide poisoning. However, this does not come without alarm signals from the body. According to the medical portal netdoktor, these include “sweating, accelerated breathing, accelerated heartbeat, headaches, confusion, loss of

	consciousness". The unconsciousness of the girl could therefore be an indication of such poisoning."
24) Student Deaths Lead Chinese Schools to Change Mask Rules, that's, 2020	"During the month of April, three cases of students suffering sudden cardiac death (SCD) while running during gym class have been reported in Zhejiang, Henan and Hunan provinces. Beijing Evening News noted that all three students were wearing masks at the time of their deaths, igniting a critical discussion over school rules on when students should wear masks."
25) Blaylock: Face Masks Pose Serious Risks To The Healthy, 2020	"As for the scientific support for the use of face mask, a recent careful examination of the literature, in which 17 of the best studies were analyzed, concluded that, "None of the studies established a conclusive relationship between mask/respirator use and protection against influenza infection." ¹ Keep in mind, no studies have been done to demonstrate that either a cloth mask or the N95 mask has any effect on transmission of the COVID-19 virus. Any recommendations, therefore, have to be based on studies of influenza virus transmission. And, as you have seen, there is no conclusive evidence of their efficiency in controlling flu virus transmission."
26) The mask requirement is responsible for severe psychological damage and the weakening of the immune system, Corona Transition, 2020	"In fact, the mask has the potential to "trigger strong psychovegetative stress reactions via emerging aggression, which correlate significantly with the degree of stressful after-effects". Prousa is not alone in her opinion. Several psychologists dealt with the mask problem — and most came to devastating results. Ignoring them would be fatal, according to Prousa."
27) The physiological impact of wearing an N95 mask during hemodialysis as a precaution against SARS in patients with end-stage renal disease, Kao, 2004	"Wearing an N95 mask for 4 hours during HD significantly reduced PaO ₂ and increased respiratory adverse effects in ESRD patients."
28) Is a Mask That Covers the Mouth and Nose Free from Undesirable Side Effects in Everyday Use and Free of Potential Hazards?, Kisielinski, 2021	"We objectified evaluation evidenced changes in respiratory physiology of mask wearers with significant correlation of O ₂ drop and fatigue ($p < 0.05$), a clustered co-occurrence of respiratory impairment and O ₂ drop (67%), N95 mask and CO ₂ rise (82%), N95 mask and O ₂ drop (72%), N95 mask and headache (60%), respiratory impairment and temperature rise (88%), but also temperature rise and moisture (100%) under the masks. Extended mask-wearing by the general population could lead to relevant effects and consequences in many medical fields." "Here are the pathophysiological changes and subjective complaints: 1) Increase in blood carbon dioxide 2) Increase in breathing resistance 3) Decrease in blood oxygen saturation 4) Increase in heart rate 5) Decrease in cardiopulmonary capacity 6) Feeling of exhaustion 7) Increase in respiratory rate 8) Difficulty breathing and shortness of breath 9) Headache 10) Dizziness 11) Feeling of dampness and heat 12) Drowsiness (qualitative neurological deficits) 13) Decrease in empathy perception 14) Impaired skin barrier function with acne, itching and skin lesions"
29) Is N95 face mask linked to dizziness and headache?, Ipek, 2021	"Respiratory alkalosis and hypocarbia were detected after the use of N95. Acute respiratory alkalosis can cause headache, anxiety, tremor, muscle cramps. In this study, it was quantitatively shown that the participants' symptoms were due to respiratory alkalosis and hypocarbia."

30) COVID-19 prompts a team of engineers to rethink the humble face mask, Myers, 2020	<p>“But in filtering those particles, the mask also makes it harder to breathe. N95 masks are estimated to reduce oxygen intake by anywhere from 5 to 20 percent. That’s significant, even for a healthy person. It can cause dizziness and lightheadedness. If you wear a mask long enough, it can damage the lungs. For a patient in respiratory distress, it can even be life threatening.”</p>
31) 70 doctors in open letter to Ben Weyts: ‘Abolish mandatory mouth mask at school’ – Belgium, World Today News, 2020	<p>“In an open letter to the Flemish Minister of Education Ben Weyts (N-VA), 70 doctors ask to abolish the mandatory mouth mask at school, both for the teachers and for the students. Weyts does not intend to change course. The doctors ask that Minister Ben Weyts immediately reverses his working method: no mouth mask obligation at school, only protect the risk group and only the advice that people with a possible risk profile should consult their doctor.”</p>
32) Face masks pose dangers for babies, toddlers during COVID-19 pandemic, UC Davis Health, 2020	<p>“Masks may present a choking hazard for young children. Also, depending on the mask and the fit, the child may have trouble breathing. If this happens, they need to be able to take it off,” said UC Davis pediatrician Lena van der List. “Children less than 2 years of age will not reliably be able to remove a face mask and could suffocate. Therefore, masks should not routinely be used for young children...” “The younger the child, the more likely they will be to not wear the mask properly, reach under the mask and touch potentially contaminated masks,” said Dean Blumberg, chief of pediatric infectious diseases at UC Davis Children’s Hospital. “Of course, this depends on the developmental level of the individual child. But I think masks are not likely to provide much potential benefit over risk until the teen years.”</p>
33) Covid-19: Important potential side effects of wearing face masks that we should bear in mind, Lazzarino, 2020	<p>“Other potential side effects that we must consider, however, are 1) The quality and volume of speech between people wearing masks is considerably compromised and they may unconsciously come closer 2) Wearing a mask makes the exhaled air go into the eyes. This generates an impulse to touch the eyes. 3) If your hands are contaminated, you are infecting yourself, 4) Face masks make breathing more difficult. Moreover, a fraction of carbon dioxide previously exhaled is inhaled at each respiratory cycle. Those phenomena increase breathing frequency and deepness, and they may worsen the burden of covid-19 if infected people wearing masks spread more contaminated air. This may also worsen the clinical condition of infected people if the enhanced breathing pushes the viral load down into their lungs, 5) The innate immunity’s efficacy is highly dependent on the viral load. If masks determine a humid habitat where SARS-CoV-2 can remain active because of the water vapour continuously provided by breathing and captured by the mask fabric, they determine an increase in viral load (by re-inhaling exhaled viruses) and therefore they can cause a defeat of the innate immunity and an increase in infections.”</p>
34) Risks of N95 Face Mask Use in Subjects With COPD, Kyung, 2020	<p>“Of the 97 subjects, 7 with COPD did not wear the N95 for the entire test duration. This mask-failure group showed higher British modified Medical Research Council dyspnea scale scores and lower FEV₁ percent of predicted values than did the successful mask use group. A modified Medical Research Council dyspnea scale score ≥ 3 (odds ratio 167, 95% CI 8.4 to >999.9; P = .008) or a FEV₁ < 30% predicted (odds ratio 163, 95% CI 7.4 to >999.9; P = .001) was associated with a risk of failure to wear the N95. Breathing frequency,</p>

	blood oxygen saturation, and exhaled carbon dioxide levels also showed significant differences before and after N95 use.”
35) Masks too dangerous for children under 2, medical group warns, The Japan Times, 2020	“Children under the age of 2 shouldn’t wear masks because they can make breathing difficult and increase the risk of choking, a medical group has said, launching an urgent appeal to parents as the nation reopens from the coronavirus crisis...Masks can make breathing difficult because infants have narrow air passages,” which increases the burden on their hearts, the association said, adding that masks also raise the risk of heat stroke for them.”
36) Face masks can be problematic, dangerous to health of some Canadians: advocates, Spenser, 2020	“Face masks are dangerous to the health of some Canadians and problematic for some others...Asthma Canada president and CEO Vanessa Foran said simply wearing a mask could create risk of an asthma attack.”
37) COVID-19 Masks Are a Crime Against Humanity and Child Abuse, Griesz-Brissou, 2020	“The rebreathing of our exhaled air will without a doubt create oxygen deficiency and a flooding of carbon dioxide. We know that the human brain is very sensitive to oxygen deprivation. There are nerve cells for example in the hippocampus, that can’t be longer than 3 minutes without oxygen – they cannot survive. The acute warning symptoms are headaches, drowsiness, dizziness, issues in concentration, slowing down of the reaction time – reactions of the cognitive system. However, when you have chronic oxygen deprivation, all of those symptoms disappear, because you get used to it. But your efficiency will remain impaired and the undersupply of oxygen in your brain continues to progress. We know that neurodegenerative diseases take years to decades to develop. If today you forget your phone number, the breakdown in your brain would have already started 20 or 30 years ago...The child needs the brain to learn, and the brain needs oxygen to function. We don’t need a clinical study for that. This is simple, indisputable physiology. Conscious and purposely induced oxygen deficiency is an absolutely deliberate health hazard, and an absolute medical contraindication.”
38) Study shows how masks are harming children, Mercola, 2021	“Data from the first registry to record children’s experiences with masks show physical, psychological and behavioral issues including irritability, difficulty concentrating and impaired learning. Since school shutdowns in spring 2020, an increasing number of parents are seeking drug treatment for attention deficit hyperactivity disorder (ADHD) for their children. Evidence from the U.K. shows schools are not the super spreaders health officials said they were; measured rates of infection in schools were the same as the community, not higher. A large randomized controlled trial showed wearing masks does not reduce the spread of SARS-CoV-2.”
39) New Study Finds Masks Hurt Schoolchildren Physically, Psychologically, and Behaviorally, Hall, 2021 https://www.researchsquare.com/article/rs-124394/v2	“A new study, involving over 25,000 school-aged children, shows that masks are harming schoolchildren physically, psychologically, and behaviorally, revealing 24 distinct health issues associated with wearing masks...Though these results are concerning, the study also found that 29.7% of children experienced shortness of breath, 26.4% experienced dizziness, and hundreds of the participants experiencing accelerated respiration, tightness in chest, weakness, and short-term impairment of consciousness.”
40) Protective Face Masks: Effect on the Oxygenation and Heart Rate Status of Oral Surgeons during Surgery, Scarano, 2021	“In all 20 surgeons wearing FFP2 covered by surgical masks, a reduction in arterial O ₂ saturation from around 97.5% before surgery to 94% after surgery was recorded with increase of heart rates. A

	shortness of breath and light-headedness/headaches were also noted.”
41) Effects of surgical and FFP2/N95 face masks on cardiopulmonary exercise capacity, Fikenzer, 2020	“Ventilation, cardiopulmonary exercise capacity and comfort are reduced by surgical masks and highly impaired by FFP2/N95 face masks in healthy individuals. These data are important for recommendations on wearing face masks at work or during physical exercise.”
42) Headaches Associated With Personal Protective Equipment – A Cross-Sectional Study Among Frontline Healthcare Workers During COVID-19, Ong, 2020	“Most healthcare workers develop de novo PPE-associated headaches or exacerbation of their pre-existing headache disorders.”
43) Open letter from medical doctors and health professionals to all Belgian authorities and all Belgian media, The American Institute of Stress, 2020	“Wearing a mask is not without side effects. Oxygen deficiency (headache, nausea, fatigue, loss of concentration) occurs fairly quickly, an effect similar to altitude sickness. Every day we now see patients complaining of headaches, sinus problems, respiratory problems, and hyperventilation due to wearing masks. In addition, the accumulated CO2 leads to a toxic acidification of the organism which affects our immunity. Some experts even warn of increased transmission of the virus in case of inappropriate use of the mask.”
44) Reusing masks may increase your risk of coronavirus infection, expert says, Laguipo, 2020	“For the public, they should not wear facemasks unless they are sick, and if a healthcare worker advised them.”For the average member of the public walking down a street, it is not a good idea,” Dr. Harries said.”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,” she added.Further, she added that behavioral issues could adversely put themselves at more risk of getting the infection. For instance, people go out and don’t wash their hands, they touch parts of the mask or their face, and they get infected.”
45) What’s Going On Under the Masks?, Wright, 2021	“Americans today have pretty good chompers on average, at least relative to most other people, past and present. Nevertheless, we do not think enough about oral health as evidenced by the almost complete lack of discussion regarding the effect of lockdowns and mandatory masking on our mouths.”
46) Experimental Assessment of Carbon Dioxide Content in Inhaled Air With or Without Face Masks in Healthy ChildrenA Randomized Clinical Trial, Walach, 2021	“A large-scale survey in Germany of adverse effects in parents and children using data of 25930 children has shown that 68% of the participating children had problems when wearing nose and mouth coverings.”
47) NM Kids forced to wear masks while running in 100-degree heat; Parents are striking back, Smith, 2021	“Nationally, children have a 99.997% survival rate from COVID-19. In New Mexico, only 0.7% of child COVID-19 cases have resulted in hospitalization. It is clear that children have an extremely low risk of severe illness or death from COVID-19, and mask mandates are placing a burden upon kids which is detrimental to their own health and well-being.”
48) Health Canada issues advisory for disposable masks with graphene, CBC, 2021	“Health Canada is advising Canadians not to use disposable face masks that contain graphene. Health Canada issued the notice on Friday and said wearers could inhale graphene, a single layer of carbon atoms. Masks containing the toxic particles may have been distributed in some health-care facilities.”
49) COVID-19: Performance study of microplastic inhalation risk posed by wearing	“Wearing masks considerably reduces the inhalation risk of particles (e.g., granular microplastics and unknown particles) even when they

<p>masks, Li, 2021</p> <p>Is graphene safe?</p>	<p>are worn continuously for 720 h. Surgical, cotton, fashion, and activated carbon masks wearing pose higher fiber-like microplastic inhalation risk, while all masks generally reduced exposure when used under their supposed time (<4 h). N95 poses less fiber-like microplastic inhalation risk. Reusing masks after they underwent different disinfection pre-treatment processes can increase the risk of particle (e.g., granular microplastics) and fiber-like microplastic inhalation. Ultraviolet disinfection exerts a relatively weak effect on fiber-like microplastic inhalation, and thus, it can be recommended as a treatment process for reusing masks if proven effective from microbiological standpoint. Wearing an N95 mask reduces the inhalation risk of spherical-type microplastics by 25.5 times compared with not wearing a mask.”</p>
<p>50) Manufacturers have been using nanotechnology-derived graphene in face masks — now there are safety concerns, Maynard, 2021</p>	<p>“Early concerns around graphene were sparked by previous research on another form of carbon — carbon nanotubes. It turns out that some forms of these fiber-like materials can cause serious harm if inhaled. And following on from research here, a natural next-question to ask is whether carbon nanotubes’ close cousin graphene comes with similar concerns. Because graphene lacks many of the physical and chemical aspects of carbon nanotubes that make them harmful (such as being long, thin, and hard for the body to get rid of), the indications are that the material is safer than its nanotube cousins. But safer doesn’t mean safe. And current research indicates that this is not a material that should be used where it could potentially be inhaled, without a good amount of safety testing first...As a general rule of thumb, engineered nanomaterials should not be used in products where they might inadvertently be inhaled and reach the sensitive lower regions of the lungs.”</p>
<p>51) Masking young children in school harms language acquisition, Walsh, 2021</p>	<p>“This is important because children and/or students do not have the speech or language ability that adults have — they are not equally able and the ability to see the face and especially the mouth is critical to language acquisition which children and/or students are engaged in at all times. Furthermore, the ability to see the mouth is not only essential to communication but also essential to brain development.” Studies show that by age four, kids from low-income households will hear 30 million less words than their more affluent counterparts, who get more quality face-time with caretakers.” (https://news.stanford.edu/news/2014/november/language-toddlers-fernauld-110514.html).”</p>
<p>52) Dangerous pathogens found on children’s face masks, Rational Ground, 2021</p>	<p>“A group of parents in Gainesville, FL, sent 6 face masks to a lab at the University of Florida, requesting an analysis of contaminants found on the masks after they had been worn. The resulting report found that five masks were contaminated with bacteria, parasites, and fungi, including three with dangerous pathogenic and pneumonia-causing bacteria. Although the test is capable of detecting viruses, including SARS-CoV-2, only one virus was found on one mask (alcelaphine herpesvirus 1)...Half of the masks were contaminated with one or more strains of pneumonia-causing bacteria. One-third were contaminated with one or more strains of meningitis-causing bacteria. One-third were contaminated with dangerous, antibiotic-resistant bacterial pathogens. In addition, less dangerous pathogens were identified, including pathogens that can cause fever, ulcers,</p>

	acne, yeast infections, strep throat, periodontal disease, Rocky Mountain Spotted Fever, and more.”
53) Face mask dermatitis” due to compulsory facial masks during the SARS-CoV-2 pandemic: data from 550 health care and non-health care workers in Germany, Niesert, 2021	“The duration of wearing masks showed a significant impact on the prevalence of symptoms ($p < 0.001$). Type IV hypersensitivity was significantly more likely in participants with symptoms compared to those without symptoms ($p = 0.001$), whereas no increase in symptoms was observed in participants with atopic diathesis. HCWs used facial skin care products significantly more often than non-HCWs ($p = 0.001$).”
54) Effect of Wearing Face Masks on the Carbon Dioxide Concentration in the Breathing Zone, AAQR/Geiss, 2020	“Detected carbon dioxide concentrations ranged from 2150 ± 192 to 2875 ± 323 ppm. The concentrations of carbon dioxide while not wearing a face mask varied from 500–900 ppm. Doing office work and standing still on the treadmill each resulted in carbon dioxide concentrations of around 2200 ppm. A small increase could be observed when walking at a speed of 3 km h ⁻¹ (leisurely walking pace)...concentrations in the detected range can cause undesirable symptoms, such as fatigue, headache, and loss of concentration.”
55) Surgical masks as source of bacterial contamination during operative procedures, Zhiging, 2018	“The source of bacterial contamination in SMs was the body surface of the surgeons rather than the OR environment. Moreover, we recommend that surgeons should change the mask after each operation, especially those beyond 2 hours.”
56) The Damage of Masking Children Could be Irreparable, Hussey, 2021	“When we surround children with mask-wearers for a year at a time, are we impairing their face barcode recognition during a period of hot neural development, thus putting full development of the FFA at risk? Does the demand for separation from others, reducing social interaction, add to the potential consequences as it might in autism? When can we be sure that we won't interfere with visual input to the face recognition visual neurology so we don't interfere with brain development? How much time with stimulus interference can we allow without consequences? Those are all questions currently without answers; we don't know. Unfortunately, the science implies that if we mess up brain development for faces, we may not currently have therapies to undo everything we've done.”
57) Masks can be Murder, Grossman, 2021	“Wearing masks can create a sense of anonymity for an aggressor, while also dehumanizing the victim. This prevents empathy, empowering violence, and murder.” Masking helps remove empathy and compassion, allowing others to commit unspeakable acts on the masked person.”
58) London high school teacher calls face masks an 'egregious and unforgivable form of child abuse, Butler, 2020	“In his email, Farquharson called the campaign to legislate mask wearing a “shameful farce, a charade, an act of political theatre” that's more about enforcing “obedience and compliance” than it is about public health. He also likened children wearing masks to “involuntary self-torture,” calling it “an egregious and unforgivable form of child abuse and physical assault.”
59) UK Government Advisor Admits Masks Are Just “Comfort Blankets” That Do Virtually Nothing, ZeroHedge, 2021	“As the UK Government heralds “freedom day” today, which is anything but, a prominent government scientific advisor has admitted that face masks do very little to protect from coronavirus and are basically just “comfort blankets...the professor noted that “those aerosols escape masks and will render the mask ineffective,” adding “The public were demanding something must be done, they got masks, it is just a comfort blanket. But now it is entrenched, and we are entrenching bad behaviour...all around the world you can

	look at mask mandates and superimpose on infection rates, you cannot see that mask mandates made any effect whatsoever,” Axon further noted, adding that “The best thing you can say about any mask is that any positive effect they do have is too small to be measured.”
60) Masks, false safety and real dangers, Part 1: Friable mask particulate and lung vulnerability, Borovoy, 2020	“Surgical personnel are trained to never touch any part of a mask, except the loops and the nose bridge. Otherwise, the mask is considered useless and is to be replaced. Surgical personnel are strictly trained not to touch their masks otherwise. However, the general public may be seen touching various parts of their masks. Even the masks just removed from manufacturer packaging have been shown in the above photos to contain particulate and fiber that would not be optimal to inhale... Further concerns of macrophage response and other immune and inflammatory and fibroblast response to such inhaled particles specifically from facemasks should be the subject of more research. 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.”
61) Medical Masks, Desai, 2020	“Face masks should be used only by individuals who have symptoms of respiratory infection such as coughing, sneezing, or, in some cases, fever. Face masks should also be worn by health care workers, by individuals who are taking care of or are in close contact with people who have respiratory infections, or otherwise as directed by a doctor. Face masks should not be worn by healthy individuals to protect themselves from acquiring respiratory infection because there is no evidence to suggest that face masks worn by healthy individuals are effective in preventing people from becoming ill.”

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