Why I Wear a Mask

A pamphlet about care

neoliberalism

abandonment

survival

&

resistance

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Introduction

Why do I wear a mask? Well, do you know how clean the air you're breathing is?

This pamphlet may be a hard read because it challenges behaviour that you probably have come to consider normal. It tells a history that you may not be aware of, communicates science you might not have heard before, and suggests adaptations that you may currently consider to be unnecessary.

My position is informed by years of living as a mostly housebound disabled person, by my community activism, by my PhD that studied how viruses impact their hosts, and by my continual reading of the scientific literature on covid and the virus that causes it, SARS-CoV-2.

With the lived experience of disability I no longer think of myself as invincible, and I have an extremely strong instinct to protect my remaining health. Pre-pandemic, I lived through the transition from 'healthy' to chronically ill, and experienced a dramatic change in my relationship with doctors. As someone who is chronically ill, I routinely face medical gaslighting and often see the NHS prioritising saving money at the expense of my quality of life. I struggle to get care while I deal with illness that is long term and debilitating. It has been a shock to see how devalued I have become.

My scientific interest in viruses has lead me to keep up to date on the scientific and medical literature on covid and the lasting effects that it can have. I see the evidence of how different this virus is from the common cold, and how frequent, widespread, and untreatable the damage it can do is. I am motivated to write this pamphlet because I want as few people as possible to suffer through chronic illness, and everyday I see people taking risks to their health that I would consider to be unacceptable to me. It's my hope that this is because people are uninformed about the risk. To be clear, this is no fault of their own – public health institutions have failed to prioritise policy that would keep people healthy, and have failed to communicate clearly to inform people about the risks.

This pamphlet contains a lot of information about covid and the ways to mitigate it, especially masking, which I hope you will be curious to learn about. It may be a lot for you to take in, and it might cause you to feel unpleasant emotions like defensiveness, anger, fear, betrayal. It may be hard to look back over the last years in light of these new facts. Take the time you need and

do what you need to do to process these emotions. This information is here when you want to access it.

A Disabled History of the Early Pandemic

In 2020 we rallied together to protect the vulnerable. Vulnerable people, the immunocompromised and the elderly were told to shield. There was an outpouring of mutual aid to get them groceries and other supplies, organised organically by people who wanted to help. As lockdowns were imposed, there was a huge shift to online meetings and appointments – the accommodations that disabled people had been asking for and been denied for years suddenly materialised overnight. People were paid to self-isolate, and we all took illness seriously.

The Great Barrington Declaration (GBD), is an open letter that pushed for 'herd immunity' instead of lockdowns. Its signatories are a who's who of climate denial and right wing think tanks. Herd immunity is the idea that after a population has been exposed to a virus, enough people will be immune so that it won't spread anymore. It assumes that infection will invoke lasting immunity – something that has recently been proven to be impossible for covid [Nguyen 2024]. GBD advocated for 'focused protection' of the vulnerable, essentially isolating them from society. This is of course impossible as vulnerable people interact with all aspects of society. Allowing everyone to catch covid also assumes that there are no long term effects of infection – something that was known to be false as early as May 2020, when patients continued to report symptoms months after infection. If covid were allowed to let rip, the disability caused by mass infection would mean that more and more people would become vulnerable and then should also have to isolate. At the time, the WHO and other academic and public health organisations criticised GBD as dangerous and not grounded in science. Today, the policies promoted by GBD have been implemented by all western countries, forcing vulnerable people into shielding permanently or taking outsized risks to engage with society.

In time, the majority of the adult population was vaccinated. Vaccines gave (and still give) good protection against severe disease, and lowered the fatality rate from acute covid to relieve pressure on hospitals. At the urging of the CEO of the US airline Delta, CDC guidance of isolation was reduced from 10 days, which is scientifically supported, to 5 days which was chosen to save the airline money [NPR 2021 *Delta's CEO asked the CDC for 5 day isolation*]. The reduced isolation period was subsequently adopted around the world, following the lead of

the CDC.

Schemes like "Eat out to help out" in the UK tried to push an illusion of normalcy to prop up the economy. Sir Patrick Vallance gave testimony at the Covid Inquiry that the scheme was "highly likely" to have increased deaths in the UK [BBC 2023 *Vallance says Eat Out to Help Out scheme likely increased Covid deaths*].

Early on, the risk of airborne transmission was downplayed. We knew that airborne transmission was a major source of spread from the 2003 SARS pandemic [Yu 2004]. The SARS virus is the closest known relative of the virus that causes covid, SARS-CoV-2. It was a foolish and reckless assumption to make that covid would not be airborne. However, the dogma that it only spreads 2 meters and by respiratory droplets was much cheaper to mitigate against. Droplet spread is an individual responsibility – just stay 2 meters away from anyone – whereas mitigating against airborne spread would require a collective response to upgrade ventilation systems everywhere. Today, the risk is even more individualised with all health authorities in the western world prioritising handwashing as the most important covid mitigation. Of course you should wash your hands, but it will do nothing to stop the spread of covid [Onakpoya 2021].

In the UK "freedom day" in 2021 was the beginning of a campaign of social murder – forcing people to go back to work, and children to go back to school unvaccinated, with no other mitigations against a pathogen known to increase the risk of death. The values of our society were written clearly: propping up the economy in the short term is more important than having a healthy population, pretending that somehow the economy is not made up of people. Indeed, spreading disease is an old tool of the coloniser. The emergency phase of the pandemic was declared over in May 2023, leading many to mistakenly believe this meant the pandemic itself was over and could be forgotten.

In the early days, we saw that the needs of disabled people could be accommodated, that everyone could be housed, that care could take priority over short term profit, and that our leaders could work in the interests of the people they supposedly represent. Then we saw it all torn down by some rich people who weren't getting richer as quickly as they wanted to. As a result, life for everyone else became cheaper and cheaper.

Now, we live with mass infection and vulnerable people are excluded from society. The evidence that covid does does damage far beyond the initial infection continues to pile up. People are

becoming sick more often, and sicker, than they did pre-pandemic. In both the UK and US, record numbers of people are off work on long term sick leave. And most people continue as if nothing is wrong, not realising the great failing of our public health institutions to inform people about the risks that they are taking.

How our leaders have manufactured apathy towards mass death and disability devalues life and dovetails perfectly with the neoliberal policies that have run the UK since Thatcher, and the US since Reagan. Pushing the responsibility of public health onto the individual is an impossible task when sick leave policy, workplace protections (especially for healthcare workers) are not aligned with worker's rights or with infection control, and when government policy dismantles testing and tracing programs that provide insight into what is happening.

The official covid policy as stated by the chief medical advisor to US president Biden, Anthony Fauci, is that "The vulnerable will fall by the wayside". A fiction has been narrated in which covid is now only dangerous to some people, but this is not backed up by scientific evidence. The eugenic media campaign to minimise covid has been successful in convincing people that they, the healthy, will not be affected because "it's just a cold".

It's not just a cold

The covid vaccines are effective at preventing death from acute disease, so we are not seeing the same horrific waves of death as early in the pandemic. However, covid is still killing people. Cumulatively, as of March 2024, more children in the UK have died of the Omicron variant (the one that was touted as 'mild' and 'a natural vaccine') than died of the earlier variants [UKHSA 2024 *Covid-19 Dashboard*]. Marginalised populations also see higher rates of death. Black and minority ethnic people are about 1.5 times more likely to to die from covid, and only a small part of the excess risk is explained by a higher disease burden or by higher levels of deprivation [Williamson 2020]. Disabled people have more than twice the death rate of able bodied people [Kuper 2023]. Immunocompromised people in particular are unable to mount a robust immune response to the vaccine, and so remain up to 13 times more likely to have severe outcomes from acute covid – they continue to be disproportionately impacted by covid infection, and have an urgent need for additional preventative measures [Evans 2023].

Although covid is airborne, it is not just a respiratory disease. It is a multi-system vascular disease that can have lingering effects for months or even years in 'fit and healthy' people who

had mild cases. However, since the acute disease is sometimes short and very similar to a cold, people think once they're over the acute phase, they're in the clear. Covid attacks the lining of your blood vessels. This tissue is not innervated, so you cannot feel the damage it is causing. You can feel fine and not know you've been harmed [Libby 2020]. Since covid infects the lining of the blood vessels, any part of the body that needs blood can be impacted.

Post infection, rates of cardiovascular, neurological, gastrointestinal, kidney, and autoimmune disease are elevated -- and increase after reinfection [Bowe 2022]. Over 1500 papers have been published on the effects of covid on the body, and have shown it can be detrimental to every major organ system. One of the primary impacts is to cardiovascular health. The British Heart Foundation cautions that there have been 100,000 excess cardiovascular deaths in England since the pandemic began [BHF 2023 *Excess Deaths Analysis*].

The impact on children will take decades to properly assess, but already we are seeing that children who were infected in utero are experiencing developmental abnormalities and neurodevelopmental disorders at increased rates [Edlow 2022, Guo 2024].

Long covid was recognised already in 2020, as some people did not recover from their initial infections. Long covid is defined new, otherwise unexplained symptoms that last for at least 2 months, beginning 3 months after infection. Common symptoms include, but are not limited to, fatigue, shortness of breath, and cognitive dysfunction, and generally have an impact on everyday functioning [Soriano 2022]. The full list of long covid symptoms is numerous, varied, and covers a range of severities. Some have an impact on quality of life, loss of taste and smell, tinnitus, and erectile dysfunction, but are not life threatening, whereas others are far more serious, such as clotting leading to stroke and heart attack, autonomic dysfunction causing conditions like POTS in which the body cannot regulate blood pressure, placental damage leading to stillbirth, neuro-inflammation leading to cognitive dysfunction, psychosis, or dementia. Further, covid causes damage to both the innate and adaptive parts of the immune system [Reuschl 2024, Yin 2024] meaning that you are more vulnerable to new infections including Strep A, Mycoplasma Pneumoniae, fungal infections, and sepsis. Immune dysfunction also means that latent infections that were previously controlled by the immune system can reactivate, such as shingles, EBV (glandular fever/mono) and TB.

A consensus is emerging that 1 in 10 covid cases develop long covid in vaccinated adults, and the rate is twice as high in unvaccinated adults [Altmann 2023]. Middle aged women are 30%

Effects of Long Covid

Covid affects any part of the body that needs blood [Davis 2023, Bonilla 2023, Peter 2025].

Cardiovascular

Chest pain

Palpitations

Postural orthostatic tachycardia syndrome (POTS)

Cough

Heart attack

Shortness of breath

Blood vessels

Fatigue

Deep vein thrombosis

Stroke

Pulmonary embolism

Coagulopathy

Covid toes

Hair loss

Tooth loss

Neurological

Brain Fog

Post exertional malaise

Cognitive impairment

Disordered sleep

Memory loss

Short term memory problems

Dizziness and balance issues

Numbness/tingling

Headache

Dementia

Depression

Anxiety

Psychosis

Suicide

Seizures

Vaccination does not protect against neurological symptoms [Mukherjee 2024]

Senses

Sensitivity to light and noise

Loss of taste and smell

Tinnitus

Retinal abnormalities [Castellino 2024]

Hearing loss [Gibson 2023]

Reproductive

Premature birth and neurodevelopmental disorders [Edlow 2022]

Developmental abnormalities [Guo 2024]

Increased and worsening premenstrual symptoms

Irregular menstruation

Erectile dysfunction

Immune System

Autoimmunity

Mast cell activation syndrome (MCAS)

Impairs innate immune system [Reuschl 2024]

Impairs adaptive immune system [Yin 2024]

Likely promotes cancer [Jahankhani 2023]

Reactivation of latent viruses: EBV (glandular fever/mono), Varicella Zoster (shingles)

Reactivation of latent TB [Colby 2022]

Pancreas

Diabetes

Gastrointestinal

Abdominal pain

Nausea

Kidney, liver, spleen

Organ injury

more likely to develop long covid than men [Shah 2025]. The rate is higher in children, 1 in 4 children who are infected experience long covid symptoms [Lopez-Leon 2022]. This is a new chance every time you're infected, so just because you were fine the first time you got sick doesn't mean the next infection won't disable you. Statistics Canada calculates that the risk of getting long covid in adults is 37% after contracting covid 3 times [Stats Canada 2023 *Experiences of Canadians with long-term symptoms following COVID-19*]. Infection does not give you lasting immunity, and repeat infection compounds organ damage [Bowe 2022]. There are many possible theories as to what long covid is [Davis 2023], but there is no clear cause yet.

About half of long covid cases or about 5% of all covid cases can be diagnosed as myalgic encephalomyelitis, ME, also called chronic fatigue syndrome [Kedor 2022, Vernon 2025]. ME is a chronic neuroimmune disease with a very low recovery rate that results in a quality of life lower than many cancers, leaving people with severe cases bed bound. It is a devastating neuroinflammatory state that causes profound fatigue, muscle pain, cognitive impairment, sensory sensitivities, and is worsened by exercise, a condition called post exertional malaise (PEM). Moderate to severe patients can easily trigger PEM through the normal demands of living, meaning their activities are extremely limited. Currently there is no cure and there are no approved or effective treatments for ME. ME researcher Carmen Schiebenbogen, has said she never thought it possible that a disease as serious as ME could exist whilst we know so little about it. People with long covid, and especially with ME, are left with no treatment options and very little help.

Why do I wear a mask? Because I don't need another chronic illness, the one I have is enough of a burden already. Normalcy bias can be very strong. I don't believe people truly understand the risk that long covid poses, and that it can impact anyone, so I will say this as bluntly as possible. By catching covid repeatedly, you are destroying your health, and by spreading it, you are destroying the health of the people around you.

Ignoring it doesn't work

Today, it is hard to even know how much covid is circulating. In general, there is no attention paid to the pandemic that continues to infect people, and that very often has long term effects that disable people.

We cannot solve any problem without clearly acknowledging the problem, and the myriad of ways that we continue to ignore covid are compounding to create a very sick world. To ignore the reality of this disease is to inflict a form of collective punishment on the disabled and vulnerable, while at the same time increasing the disabled and vulnerable population.

Early in 2020, Trump was laughed at when he said "If we stop testing, we'd have fewer cases", but it is now official policy not to test. There is no routine testing in hospitals to isolate patients with covid. The world leading ONS covid survey was cancelled in 2023 and reporting has been stripped down to nearly nothing. Free tests are no longer available. Claiming the pandemic is over because there are very few positive cases while at the same time dismantling testing programs to identify positive cases is disingenuous at best.

Public health policy in the UK considers death to be the only adverse outcome from covid, but there is ample scientific evidence that covid causes long term symptoms, many of which can be debilitating. Such wilful ignorance ignores the risk of disability and continues to let infection rip. The government guidance on infection control and on the recommendations for who should be vaccinated in the spring and fall do not include a risk assessment of long covid, which is grossly negligent given the accumulating evidence for it.

The idea that covid only spreads only via respiratory droplets is pervasive in the NHS, and it is incorrect [Scientific American 2024 *A Fight About Viruses in the Air Is Finally Over. Now It's Time for Healthy Venting*]. Advisors are ignoring the fact that simply breathing or talking generates aerosols that cause airborne spread [Ehsanifar 2021]. This results in inadequate PPE being worn, healthcare workers being exposed unnecessarily, and causes the number of hospital acquired infections to soar. In Wales (the only home nation to still report on hospital acquired infections) as of January 2025, 75% of people in hospital with covid caught it in hospital [PHW 2025 *Weekly Acute Respiratory Infection Survey*]. Further, 1 in 5 people who caught covid in hospital died from it from 2020-2022 [Mirror *We need to do better – 14000 people died with covid after catching it in hospital*]. There isn't more current data on deaths

When Should I Mask?

Mask everywhere you are sharing air with other people. Especially on public transit, healthcare, grocery stores. Large events and unventilated spaces are the highest risk, but I will mask in every indoor space because I've developed the habit of it. This leaves no room for interpretation, if it's indoors, I wear a mask — even if the room is huge and empty. I don't know who is going to come into the room, and I don't know who has been in the room prior. Airborne particles can hang out for hours and still be infectious.

Outside is safer since sunlight provides UV sterilisation and a breeze provides ventilation. Personally, I would consider a spaced out sunny, breezy patio to be low risk, but I know there are people for whom the risk is still too high. However, if the patio is under an awning, in a corner against two walls, or starting to get crowded, then there is more of a chance of transmission. Spaces that are technically outside, but enclosed, like tents or huts allow aerosols to build up, and I consider them to be indoors.

If I'm getting together with a small group of people who I know to also always mask, then I consider them to be in my pod, and I will share air with them. With anyone else, I will wear a mask or meet outside.

From a harm reduction approach, masking some of the time is better than none of the time, but a mask can't work unless you wear it properly.

from hospital acquired covid because hospitals no longer test for covid. It is grossly negligent and a moral failing to cause so much harm to so many people.

Illness is the main cause of absence in schools, and absence due to illness has increased 50% since 2019 [gov.uk 2025 *Pupil Attendance in Schools*]. Parents and children are encouraged to ignore their illnesses and go to school sick, which of course increases the number of children becoming sick, which then increases the number of absences. Hospital and care workers are forced to work when sick, which means that illness continues to spread and vulnerable people are exposed to large risks even when seeing medical care.

It's a common belief that your efforts to be healthy and virtuous will protect you from being one of the vulnerable. Enough of the right supplements or smoothies, the right sort of exercise, enough yoga. Whatever you're doing has worked up until now, hasn't it? With this logic it follows that the others who are vulnerable must be vulnerable because they have failed, it's their own fault. This is health supremacy and ableism. No amount of vitamins or discipline is going to protect you against one of the most contagious viruses known. You have been lucky up to now. Ignoring your own vulnerability will not protect you.

Once people develop new chronic symptoms, there is strong pressure to dismiss them with "Everyone gets tired", or "You're just getting older", or blaming people for being lazy. The

dismissal comes from ourselves as well. Especially with symptoms like brain fog or cognitive dysfunction, it is easy to not recognise how impaired you are and to continue struggling and pretending nothing is wrong. It's common to not want to admit you have been injured and have a problem.

If you do admit to yourself you have a problem and go to the doctor, it can be a challenge to be taken seriously (especially for women and minorities). The symptoms of long covid are highly varied, mimic other conditions, and don't show up under routine testing. Many doctors won't believe their patients' experience, won't be curious to investigate it, will frequently dismiss symptoms as anxiety, deconditioning or laziness, will gaslight and refuse care, ignoring the illness. Even when patients are believed, long covid clinics in the UK are closing because there is no treatment available. Research is being done, but most of it is focused on characterising the condition, not on interventions that would improve quality of life for patients. This leaves patients on their own with very little support or help.

Living with a chronic illness limits your world. Acknowledging your limitations means you will not be doing all the things you used to do, and this makes it easy to slip out of sight. Your friends may stop visiting or inviting you along, your employer may find a reason to make you redundant so they don't need to approve the accommodations you ask for, all too often, your husband will leave you if you can no longer care for him [Karraker 2016]. Out of sight, out of mind. The disabled are ignored.

People who develop severe ME are bedbound and have extreme sensitivities to light and sound. They are unable to seek medical help because the exertion of travelling and being in a hospital environment will cause them to get worse. They are rarely seen by doctors, so the severe form of ME is ignored by medical research.

Why do I wear a mask? Because I refuse to ignore the virus that is still circulating and the damage it is causing.

Enumerating all of the ways covid can be ignored and minimised somehow adds up more disbelief. If it really was that bad, someone would tell us about it, wouldn't they? Well, they are – there are thousands of biomedical papers published, reports and briefings by Independent SAGE, an interdisciplinary group of scientists who provide clarity and transparency on covid information to the public [Independent SAGE 2024 *Reports*], reporting in the media such as

Ed Yong's articles [The Atlantic 2023 *Fatigue can shatter a person*], a BBC documentary [BBC 2023 *The long haul of long covid*], myriad personal anecdotes on social media including the documentation of physics YouTuber Diana Covern's illness [YouTube 2023 *Physics Girl LIVE with long covid*] – but their voices are much quieter than the constant drone of neoliberal narrative, pushing an illusion of normal. The egos of advisors and commentators who minimised covid are on the line and they don't want to admit they were wrong. Quietly, powerful people are taking precautions. Business leaders are taking precautions and not talking about them because they view the advantage they'll gain from not contracting covid as a trade secret. Musicians are no longer taking photos with their fans, and are installing clean air delivery systems in their venues. In photos of the PM meeting with the King, an air filter is visible in the background. You don't see many masks in public, because the people who wear masks are also generally avoiding crowds.

Apart from biomedical research, another way to see what's happening is to look at the big picture impact on health and deaths. This will show the rug that we've been sweeping all of this inconvenience under is no longer big enough to hide it all.

Record Numbers Sick

The number of people off work sick or disabled continues to grow. In the UK the number of people off work sick reached a record high of 2.82M people in January 2024, which is 1 in 14 working age people, and the rate has been abnormally high for years [ONS 2022 *Half a million more people are out of the labour force because of long-term sickness*]. 2 million people in the UK have long covid [ONS 2023 *Prevalence of ongoing symptoms following coronavirus infection in the UK*]. Long covid is already costing the UK economy billions of pounds a year in lost productivity [Wang 2024]. In the US, the cost of long covid affects more than 44 million people and is estimated to already cost up to USD$6 billion annually [Bartsch 2025]. World wide long covid is estimated to affect up to 400 million people, costing up to USD$1 trillion per year [Al-Aly 2024].

Sickness absences in the NHS doubled in 2022 and 2023 compared to earlier years. 33% of doctors have long covid [Dempsey 2024] and 60% of doctors with long covid have have their day to day activities impacted by post covid symptoms, half are unable to work full time, and 18% are unable to work at all [Waters 2023]. That's a total of 6% of all doctors who are now unable to work at all due to contracting covid.

There are impacts even in young, extremely fit populations. 25% US marines have long covid and with it slower running times on fitness tests one year post infection [Porter 2024].

These are staggering numbers, and we are only 5 years into this pandemic. Some of these people with long covid will recover, but at the rate that people keep getting reinfected, they will face the risk of contracting long covid again and again. Some people will not recover – those who have been sick with long covid for a year do not recover in their second year [Peter 2025]. While children fare better than adults – 'only' 30% of kids with long covid, or 7% of all kids, do not recover after 2 years [Stephenson 2024] – kids are missing out on school and developmental opportunities, and don't have time to be sick for a year.

Early in the pandemic, we were told that covid would 'only' kill the elderly and disabled, people who were going to die soon anyway. Ignoring for a moment that it's reprehensible to feel safe because vulnerable people are dying, if it had been true, then we would have seen the general death rate fall as soon as people were vaccinated and stopped dying of covid in 2021. However, 2022 saw the worst excess deaths in 50 years [BBC 2023 *Excess deaths in 2022 worst in 50 years*]. In the future, our 20,000 annual covid deaths are no longer going to be counted as 'excess' because they are now expected, and many won't even be measured due to lack of testing. Covid continues to cause real harm.

Covid has been and continues to be a mass disabling event. If you've had covid you are now more vulnerable to future infections, all those stats that we saw about earlier about disabled people having higher mortality rates, these now apply to you. You are only one infection away from disability. Not catching covid is the single best thing you can do for your health.

Why do I wear a mask? I have things to do, I don't have time to be sick or dead. And if I stop a chain of infection, then I'm ensuring I'm not spreading covid to anyone else.

Masking is Effective

Covid is an airborne pathogen – an infected person spreads virus particles in the same way that someone who is smoking spreads smoke. If you could smell the smoke, then you are exposed. Smoke and covid both linger in the air in indoor spaces even after people have left. We can prevent covid by reducing the amount of exhaled air that is rebreathed by anyone else. Universal masking with respirator quality masks (FFP2/3, N95, or better) is the most effective solution

What Sort of Mask?

The mask should seal securely around your mouth and nose, should not separate from your face when you exhale, and should not move around when you talk. Not all masks are equal, they are listed here in increasing order of effectiveness. Even a badly worn FFP2 will be better than nothing.

Cloth

Unfortunately cloth masks provide almost no protection against covid, although they do provide some protection against less transmissible respiratory viruses like flu or colds.

Surgical

Surgical masks are primarily designed to be a barrier for moisture, and when worn they have gaps at the sides of the face, which allow unfiltered air to get in and out. In tests, they reduce you chance of catching covid approximately in half. Surgical masks held to the face with elastics can make them more effective, but I would always recommend a respirator over a surgical mask.

FFP2, KF94

(European respirator standard, Korean standard) This is the minimum protection that I would advise. These respirators will filter out 94% of the particles in the air, and they often have earloops. Respirators are designed to have an electrostatic layer that will capture particles smaller than the holes in the mask, so they are very effective at filtering virus that is carried on airborne particles. Respirator masks hold their shape and keep the mask away from your face, making them more comfortable than surgical or cloth masks. Personally, I use an earloop FFP2 for quickly going into shops because it offers good protection for short exposures and is easy to put on and take off. These are often available for less than £1 each.

FFP3

Similar to FFP2, these respirators will filter 99% of particles, but can be harder to breathe through. These are available in different styles with ear loops and with bands that go around the head. Head bands often provide a better fit, but the fit depends on the shape of your face. Some are made with clear anti-fog panels, that allow hard of hearing people to lip read.

N95 , KN95

(US NIOSH standard, Chinese standard) These respirators filter 95% of particles, and they generally have head straps. Personally, I use a 3M Aura if I'm going into an environment that's likely to be crowded, like a train, or into an enclosed space that I'm going to be for a while, like a figure drawing class. I find these masks to be comfortable and to provide a good seal. N95 masks generally cost £3-5 each, but can be reused until they are obviously dirty.

N99, P100

Not available as disposable masks, these elastomeric respirators are reusable, with disposable filter cartridges that can be replaced. They can provide better fit than the disposable masks because they have an elastic or rubber seal that will conform to your face. Elastomerics

are often intended for industrial use, so can be large and unwieldy, but some like the Flo mask (FFP2) are designed for everyday wear and are small and cute. Respirator masks have a wide range of styles and sizes, and can cost between £20 and £200.

Exhale Valves

Some masks will come with an exhale valve that makes it easier to exhale. In some masks this is filtered, and in others it is not. If you are masking for other people's protection, then make sure you choose one that is filtered, or a mask without an exhale valve.

Fit

Try out a range of masks, because they all fit differently and will be more or less comfortable for different shaped faces. Beards and stubble will decrease the seal of the mask against your face and make them less effective. Kits can be purchased to test the fit of your mask for about £250, although I don't have personal experience with them.

Glasses Fogging

In the winter, going from outside to indoors with a mask will cause glasses to fog more than without a mask. Fogging doesn't necessarily mean the mask is leaking, it is due to warm air rising.

Add a Sip Valve

Masks can be fitted with an aftermarket valve that will allow you to drink through a straw. I don't have personal experience with them, but reports indicate they work well with some practice drinking through them. They cost £12 from SIPmask and are reusable.

Decorate Your Mask

Although masks can be purchased in different colours (primarily KF94, and primarily from Asian manufacturers), you may want to do more to match your mask to your outfit and to celebrate it as a piece of clothing instead of a medical device. The most effective strategy I've seen is to place a piece of fabric over the panels that make up the mask. Coloured lace over the white 3M Aura effectively makes the mask look elegant while not compromising its protection or breathability. You want to avoid drawing directly on the surface of the mask in case markers, glue, or other wet art supplies compromise the electrostatic layer that makes it protective. Instead, the borders of the mask where the layers are fused together can be used for gluing or sewing. @PenGwenWithLC on twitter makes gold chains that loop behind both ears and over the nose as sort of a necklace for your face — they look great on femme folks.

Particulate Protection

All of the above mask types will only filter particulate matter, including fine aerosols — which is sufficient to prevent against covid. Note that if you are ever in a situation where the air contains volatile organic compounds, acids, ammonia, etc, like a severe wildfire or industrial situation, particulate masks are insufficient to protect you, and you would instead need an elastomeric respirator mask fitted with the correct filters.

because it places a filter at any source, reducing the amount of virus in the environment, and also places a filter at the entry point to every lung. Masking can be helped by other layers of mitigations, but all other mitigations together are not as effective as masking.

Addenbrookes hospital ran a study that showed they could reduce the spread of covid nearly to zero by having staff and patients mask with FFP3 respirators [Ferris2021]. Many people who have been routinely wearing masks haven't been sick at all in the last 5 years. When masking was required (and still not done by everyone) we sufficiently limited the spread of Influenza B so much that we inadvertently eradicated one strain of it [Caini 2024].

Some people are unable to mask for a variety of reasons: they have breathing tubes, need nebulised medicine, are in hospital or prison and need to eat, are ill and vomiting, and so forth. If everyone else wears a mask, then we can provide some protection for these individuals even if they can't wear a mask themselves.

Masking is Necessary

I believe that public health measures should prioritise prevention of disease, and that immunocompromised and other vulnerable people should be able to engage with society without risking their lives or wellbeing.

Risk is not individual. If you attend a large indoor event that has the possibility of being a superspreader event, like a conference or concert, then in the days following the event you transmit the risk you took to everyone you come into contact with. Disease prevention, like so much else, is not an individual effort. If you wear a mask at that concert, then the risk is reduced. If everyone is wearing a mask at the concert, then the risk is much reduced much further.

Masking is necessary, especially in public places (schools, hospitals, prisons, public transit), where people have no choice to be there. Forcing people to be infected violates consent and is social murder. Especially around children, who mostly have not been vaccinated in the UK, and who deserve to have healthy childhoods. Especially in workplaces, because everyone has the right to access work safely. Especially in enclosed spaces because exhaled aerosols accumulate to increase the concentration of covid that can be breathed in. Especially in community settings, because doing community care means protecting each other.

Further, continued spread allows the virus to evolve new variants that have the potential to be more pathogenic and/or more contagious [Wang 2022]. The more infections there are, the more opportunities there are to evolve a more immune evasive or deadly variant. Without monitoring, we won't know this has happened until a large percentage of the population are already infected, but with masking, we can help prevent the infections that will cause a new variant to evolve, and restrict its spread even if it does.

Masking is Temporary

In the best case, masking in public is temporary with widespread, structural changes. If society invests in clean indoor air by upgrading ventilation and adding filtration in all public places, if we improve our monitoring and reporting on airborne diseases to have a good picture of how much disease is circulating, and if we mask early in response to surges and always in high risk environments, then we can create vastly cleaner air, better air quality, and safer public spaces than we had even pre-pandemic. We just need to have the will to do it. Masking is a symbol of your support for this vision.

That said, there are places that will always be high risk and where masking should remain. Healthcare should maintain masking indefinitely especially around patients with compromised immune systems, asthma, neonates, cancer patients, and so forth. Masking shouldn't only be reactionary when hospitals are overwhelmed [Independent 2025 *NHS hospitals reintroduce face mask requirement as soaring flu cases see critical incidents declared*], hospitals should be proactive about preventing disease. Seeking care should not put anyone at risk, and everyone in healthcare wearing high quality respirator masks can make hospital acquired respiratory infections a thing of the past.

Disability and Health

Simultaneously, disability is something to avoid, and disabled life is fulfilling, worthwhile, full of joy, and valuable. It's not just that I have a good life despite my disability, sometimes (rarely, but sometimes) I have a good life because of my disability. And still, I want to prevent disability, including long covid, as much as possible. Following Sunaura Taylor [Taylor, *Disabled Ecologies*], I am coming to understand health not to be a youthful ideal, but instead to be the supports that promote agency. The ability to have control over your life and decisions is health. Someone using a wheelchair in an accessible world could be just as healthy as someone who

Other mitigations

Mitigations work best as a layered strategy of many techniques, the most important of which is masking. Like Swiss cheese, any single strategy has holes, and using many strategies together will be more effective than any alone. The other mitigations listed here will reduce the amount of virus in the air and will help prevent further infections. Above all, though, masking is the most effective, cheapest to retrofit, and easiest to implement.

Vaccines

Vaccines protect against severe disease. Vaccines do not stop you from becoming infected, and while they may reduce the viral load which both lessens the acute course of illness, and reduces the chance of transmission, they still leave you vulnerable to the long term effects of covid, which occurs in about 10% of infections in vaccinated people. Vaccines only provide protection for 3-4 months, meaning that continued boosters every 6 months are necessary to top up protection. In the UK the number of people who can receive vaccines has been whittled down significantly, so for most people vaccination will come at a significant cost, around £200/person/year.

Ventilation

Proper ventilation is a large part of an effective mitigation strategy [Morawska 2024]. Increase ventilation by opening windows or doors, ideally on opposite sides of the room to create a cross breeze. Guidance from the Lancet commission is to exchange the air in the room a minimum of 6 times per hour [Lancet Commission 2022 *Proposed Non-infectious Air Delivery Rates*] which is also supported by the ASHRE American building engineering standard. Improving ventilation systems is an investment for commercial and public buildings, but the long term cost savings, considering influenza alone, is estimated at £1.3 trillion over 60 years in the UK [NERA *Infection Resilient Environments Social Cost Benefit Analysis*]. At home, opening windows in the winter it can have an impact on heating costs, but even just leaving a small gap will have a big improvement on air quality.

Being outside generally means excellent ventilation and reduces the risk of transmission dramatically. However, it is possible to be infected outside, in close proximity, in large crowds, or in spaces that are technically outside but that have been walled off and have little airflow, like tents or huts.

A carbon dioxide (CO_2) monitor can act as a proxy to measure the amount of exhaled breath in the air. Studies have shown that keeping CO_2 under 1000 ppm is associated with reductions in infection [Zand 2024]. For reference, a standard sized bedroom with windows and doors closed and one occupant can exceed 1000 ppm in under an hour. Monitors cost around £100-200.

Filtration

Filter virus out of the air with a filter that's appropriately sized for the room and number of occupants. If you are looking at purchasing a filter, HEPA will filter virtually all virus and bacteria from the air, but is expensive and slow — they do not necessarily provide the highest clean air delivery rate (CADR). Cheaper filters like MERV-13, which are generally used for furnaces in North America, will provide a higher CADR and

will be more effective at filtering all the air in a space. The airflow from the filter must be adequate for the space, for example a small lounge with two people requires a minimum of 100 cubic feet per minute of clean air, so if you are buying a filter make sure it is rated for this volume or more (or run several filters at once).

You can buy a filter for around £200 (do not get one that ionises, this will create VOC that reduce air quality, and will also cost more), or you can make one from furnace filters and PC fans. There are several designs of these home made devices, called Corsi-Rosenthal boxes [Corsi-Rosenthal Foundation UK 2025 *Clean Indoor Air Saves Lives*], but I've found the quietest and most cost effective is to use 2 20x20 inch MERV-13 filters as the sides of the box and 5 PC fans as the top, which delivers about 200 cfm clean air. These can be made for about £50.

UV

UV light provides a means to deactivate or kill virus particles in the air. Upper room UV and far UV (222 nm) are two technologies that are effective if combined with ventilation (they generate free radicals that need to be ventilated), but are very site specific in implementation and more expensive than the other mitigations on this list.

UV light can be used effectively in the upper part of large rooms where it shines across the room, not down on people. As warm exhaled air rises, it will encounter the UV light and viruses will be deactivated within seconds to minutes.

Far UV appears to not penetrate skin so seems to be safe for humans, so doesn't need to be constrained to the upper part of the room. The virus deactivating power of UV will fall off exponentially from the bulb, so the light will need to be sized properly to a space. This technology is still experimental and it is hard to recommend an off the shelf product to buy. In the future, LED far UV lights could be a cost effective layer to your mitigation strategy.

Testing

Lateral flow rapid tests (LFTs, RATs) should be used with caution and only say that a positive test means one is infectious, and a negative test is inconclusive because of the very high false negative rate [Soni 2023].

More reliable tests like PCR or other molecular amplification strategies are much more sensitive than the rapid tests. A negative result from these tests can be relied on to say that a person is not infectious at the time they were tested. Infection takes 1-2 days to be detectable even by these devices, and the person could become infectious hours after testing, so repeated testing every 12 hours is recommended. Pluslife makes a kit that costs £300 and tests are around £6 each.

Nasal sprays

Nasal sprays create a physical barrier in the nose that traps any inhaled virus in iota carrageenan or a similar matrix. Iota carrageenan is generally considered safe, and is odourless, tasteless, and (in my critical and surprised opinion) entirely inoffensive to use. Nasal sprays are not a substitute for masking, but provide another layer of protection. Birmingham bio sells bottles of Norizite for £20. ➔

Isolation

Stay home if you're sick! Don't spread your infectious respiratory illness around (whether it is covid or not). Support generous sick leave policies so that people don't miss out on income when they are sick, and aren't forced into work when sick, and can take the time they need to recover.

If you're hosting an event, provide online options so people don't have to miss out if they're not well enough to attend in person. 😷

walks, for example. However, some conditions, especially energy limiting conditions like long covid and ME, are not possible to accommodate with any supports, and severely limit our choices and actions. This is why preserving every remaining scrap of access to agency and choice, health, is of primary importance. A direct way to do this is to wear a mask. When masks are worn by others, they are supports that increase the available choices for vulnerable people, they open up access to spaces that would otherwise be inaccessible due to the risk of contracting a life changing infection.

The quality of air we breathe is just as important as the cleanliness of the water we drink. If we are going to coexist with this virus, then wearing a mask becomes basic hygiene. Even if you don't see the need to protect your own health, wearing a mask on the bus or in a grocery store is a small inconvenience that makes a huge improvement to the safety of disabled people. Wearing a mask helps make it normal for the immunocompromised people who need to wear one in order to stay alive. They will be less likely to be targeted or discriminated against if more people are wearing masks. As multiple jurisdictions in the US move to criminalise mask wearing, normalisation means there is a better chance that masks remain legal.

Why do I wear a mask? Because I value liberation for all people.

Mourn the Old World

That you are feeling grief for the carefree days of 2019 is to be faced and mourned, not ignored. It is necessary to see reality clearly in order to acknowledge what has happened and to move forward. Covid has not become seasonal as we were also told it would, like any other cold. The largest covid spike in 2024 was in the summer, and even during the lulls, levels never dropped very low. Whenever in the year and wherever in the world you are reading this, there is more covid around now than when we were all paying attention to it in 2020.

The world of 2019 doesn't exist anymore. I can't take my mask off inside, so when I travel I'm eating every meal outside. In the winter or in the rain, the essential travelling I need to do to access healthcare is really uncomfortable. I have to refuse food in most social settings (or stuff the biscuits into my pockets to eat when I can sneak outside). It's hard to see my partner's family, and it's nearly impossible to see my family an ocean away. I'm constantly making sacrifices, and it's a burden, especially because there is very little social support for masking. I'm forced to do this because my safety is not a consideration to those with the power to implement structural change.

To know that health experts are denying and ignoring a dangerous virus is to feel betrayal and insecurity. To feel that your life is not a consideration in public policy making is to feel dehumanised and rejected. To witness harm and to be able to do nothing about it causes moral injury. 'The Urgency of Normal' felt to me like a massive shift in how society was run. In fact, betrayal and dehumanisation at the hand of the government is nothing new. Experiencing it may have been new to me, but it has been the norm for people of the global majority to suffer under racism and colonialism for hundreds of years. These destructive systems that I, as a white Canadian settler, have benefited from have just now turned around to devalue me as well. Capitalism is founded on ableism, on the idea that you are only worth what you can produce, and if you can't produce you are discarded as surplus [Adler-Bolton, *Health Communism*]. Disabled people face a continual struggle to be recognised as human alongside all other marginalised groups including BIPOC, women, religious minorities, the working class, trans people, gay people, the global south, children, refugees, our planet's ecosystems, to name a few. All are devalued in the face of capital as part of the same interconnected system of oppression. If this is the first time you, like me, are feeling deeply injured by the people in power, it reflects the privilege and the ease with which we have moved through the world up until now. To me, it is helpful to see that with the pandemic, nothing has really changed in the

world, except for the fact that I am more aware of the forces of oppression, especially towards people who are more marginalised than myself. I stand in solidarity with these struggles because clean, safe air is just one piece of the liberation of all people on a healthy planet.

Mourning the old world is in part letting go of my naiveté that if I got sick, I would be cared for to improve my quality of life, and that if a disaster struck, people in power would respond in a way that would help the people affected. Additionally, I was naive to how easily the general public has been convinced to normalise illness and has come to accept mass infection and death. In writing this pamphlet, it is my sincere hope that this is due to the rampant spread of misinformation to minimise the impact of covid, and not due to callousness.

Adaptation and Resilience

A century ago, there was an influenza pandemic, the 1918 Spanish Flu. Looking back, much of that history has been forgotten – society does not want to admit it was sick. The slogan that was repeated in the media around 'freedom day' in 2021 is that we have to "learn to live with it". Shouldn't learning to live with the virus mean learning about mitigation techniques and taking steps to prevent it, rather than what it has come to mean, which is learning to accept mass infection and debility?

Thought and care must now be paid to sharing air with other people. This doesn't mean existing without connections or community, or denying ourselves the socialising that brings us joy. It does mean that we need to do these things with a bit more caution. We can still travel, masked up on busses, trains and planes. We can still gather with community, by wearing masks, by testing on reliable devices (not LFTs, see page 19). We can still eat restaurant food, by getting take out, or eating outside on a windy, sparsely populated patio, or by choosing restaurants that pay very close attention to the ventilation and filtration indoors and who provide adequate sick leave for their employees. (Unfortunately, I know of zero such restaurants in the UK.)

We can still continue to do the things that bring us joy, as long as we take some mitigations into account. This may require some creative problem solving, and some thoughtful accommodations. We are not necessarily going to be doing things exactly the same way as we did them in 2019, but we can preserve what's important – connection, caring for each other, and being together safely. In making such adaptations on individual and collective levels we become wiser and we exhibit resilience.

Showing resilience is what our leaders have refused to do. Our institutions have embraced the short sighted idea that the economy is more important than health. They have implemented policy based on greed, not science or compassion. They knew their policies would spread infection, and have pushed to get people to accept the death and neurocognitive, cardiac, and immune dysfunction that results.

It's not just a problem for covid. The abandonment and individualisation of public health efforts has increased the spread of other diseases as well. This winter both the UK and US are facing a 'quad-demic' of covid, influenza, RSV, and norovirus, with 50 hour waits at A&E and multiple trusts declaring critical incidents [BBC 2025 *Patients facing two-day waits in A&E*]. Measles, TB, whooping cough, and polio, are all occurring more frequently and in larger outbreaks than pre-pandemic. Public health used to be concerned with reducing disease. It's hard to imagine enthusiasm for a campaign to eradicate smallpox today, and it's hard to imagine widespread precautions against polio would be put in place today, as they were in the 50's. As we sit on the cusp of the next H5N1 avian influenza pandemic, the response in the US has been slow and inadequate in terms of testing of farm workers in contact with infected animals, providing them with adequate PPE, and widely reporting the findings [CNN 2024 *We 'have our head in the sand': Health experts warn US isn't reacting fast enough to threat of bird flu*]. Masks will protect you from all of these diseases too, except for norovirus and polio which are both airborne and spread effectively by fomites, so you really do have to wash your hands as well.

Beyond disease, the response to covid has given us a warning for how our leaders will react to future disasters made more frequent and intense by climate change. We can expect an outpouring of support initially, and then as it drags on, manufactured, weaponised apathy and a drive to return to normal, as if normal is working for everyone. If you become comfortable with abandoning disabled people, what will happen as climate change becomes more acute? Who will be the next marginalised group to "fall by the wayside"?

Following the 1918 pandemic, votes for fascism in Italy were directly correlated with the death rate from influenza [Galofré-Vilà 2022]. Given the recent US election and the rise of the far right throughout Europe, we should be very critical of any policies that dehumanise, or exclude people from society. Allowing the disabled to die is eugenics, and it is a stepping stone to fascism. If our political leaders and institutions are going to renege on their responsibilities of care, then we carry the burden of doing this work. It's too important not to do. Real protection takes a community, and we owe it to each other to keep ourselves safe and healthy.

Reframe thoughts about masking

"I've been around sick people but I'm not sick"

Covid has been able to spread as relentlessly as it has because people who are infected are infectious **before** they show symptoms. You can be spreading it before you know you're sick.

"I'm sick but it's not covid"

How do you know? The acute symptoms of covid can range from nearly unnoticeable through a whole range of non-specific cold symptoms including fever, cough, sore throat, sneezing, etc. Rapid tests have a massive false negative rate — a negative test does not mean you do not have covid, although, a positive test means that you absolutely do have covid [Soni 2023]. Don't let a negative test give you false confidence. Rapid tests often only show positives after several days of symptoms, so repeated testing is recommended. There is zero flu in the summer, and colds do not generally cause fevers. If you have a cold with fever in the summer, you probably have covid.

"I don't see any signs of danger from news and media and doctors"

That covid is airborne, and that it causes long term health problems has been quietly added to the website of the WHO and CDC (at the time of writing). Medicine is very hierarchical, and especially public health policy has been influenced by minimisers to downplay the long term risks in favour of short term convenience. It takes doctors and health systems a long time to absorb new information and to change clinical policy. Changing policy to recognise the importance of clean air is meeting as much resistance as Semmelweis did pioneering the idea of handwashing in 1847. He was ridiculed and persecuted because doctors didn't want to accept they could be a disease vector, despite the evidence that clean hands saved lives.

"No one else is, so why should I stand out?"

It can be hard to not conform to what everyone else is doing, for example, if you are in a group of people who are drinking, you can feel pressure to drink even if you don't want to. If you know what's right for you, don't let other people dictate how you should behave.

"I don't have to, so I won't"

You don't **have to** wash your hands before eating, and you don't **have to** stop smoking either. There are lots of things you don't **have to** do, but you do them because they're sanitary, polite, or helpful.

"If I get it, I'm young and healthy and will be fine"

The data shows that over time this is unlikely. You may be only one infection away from disability, and you don't know what you've lost until it's gone. Preserve your health because you can't get it back.

“If I get it, it was inevitable anyway”

Many people who wear masks have not been sick for 5 years. While it’s true that there is so much virus circulating that it’s possible that even people who take stringent precautions have been infected, every mask that’s worn helps reduce the amount of circulating virus.

“Being sick will be a break, and I need it”

You might end up being sick for a lot longer than you have bargained for. If you need to get sick to free you from everyday obligations and responsibilities, I would suggest you find better coping mechanisms. Getting sick is not self care. You are worth taking care of, even without the excuse of being sick. It’s ok to take a break and rest.

“We need to get sick to keep the immune system healthy”

The hygiene hypothesis is the idea that we need to be exposed to the microbes in soil to develop healthy immune systems and avoid allergies. It says nothing about pathogens. The immune system is busy every second of every day and does not need to be exposed to pathogens to be at work. The immune system is not exercised like a muscle, and most infections leave the immune system depleted for a time. A Danish study has shown that children who have common infections early in life had a higher rate of severe infections later in life compared to children whose first infections were delayed (Brustad 2025). Sickness is not health.

“Seeing a mask reminds me of stress and trauma”

The mask is a mitigation which is giving protection, it is not causing harm. Growth and recovery happens when we confront our discomfort of being vulnerable and our trauma of being injured or seeing injury happen to loved ones. The root cause of pandemic related trauma is the virus, and by wearing a mask we can effectively protect ourselves from it.

“It’s too scary and inconvenient for me if covid is dangerous”

The world is full of inconvenient and scary things. If we face them and understand them, we can take precautions against them to reduce the risk of encountering them. The truth is that air in most public buildings is unsanitary and disgusting. A mask gives you the ability to do something about that fact. I understand that it’s easy and temporarily comforting to buy into the mass delusion that the pandemic has disappeared, but it is not reality.

“If covid is dangerous, then I’ve put people at risk. I’m a good person, so it’s not dangerous”

People are not good or bad, but people can do good or bad things. Many people are not aware of the harm that covid does or how it is spread, and this is not their fault. Now you know. Every time you go out you have the opportunity to prevent contracting and spreading a life changing illness by wearing a mask. ➔

“D/deaf and hard of hearing people can’t understand me”

Masks do not muffle speech very much, but they do make it impossible to lip read. There are several ways to resolve these conflicting access needs. Masks with clear anti-fog windows are available, both as disposable FFP3 masks, and as an reusable elastomeric mask, such as the Omnimask. In a formal meeting, speech can be captioned or interpreted. Most commercial video conferencing software provides real time captions, and these can be used even for in person meetings. Meeting outside and layering other mitigations reduces the need to wear masks. The solution that works will be particular to your situation. Be open to discussion and creative problem solving.

“Masking is uncomfortable”

Masking is a temporary inconvenience, but developing chronic illness is long term, and is likely to be much more uncomfortable than masking.

There are many kinds of masks that fit differently, many of which are more comfortable than a cloth or surgical mask. Respirators like N95s and FFP2/3 hold their shape and keep the fabric of the mask off your nose. Some have head straps, and some have ear loops. People find these more or less comfortable based on the shape of their face.

“I want to see your smile!”

Smiling at someone while giving them a potentially fatal or life changing infection does not give comfort.

Last Words

Well, that's been a lot. How are you feeling after reading this, and what do you need to do to regulate yourself? In taking in all this information, what is one thing you'll remember, and one thing you'll do?

Feel free to photocopy this pamphlet or pass it on to someone else who needs to read it. Most importantly, it's simple to do the right thing going forward. Mask up.

Material Resources

If you're in Cambridge, I am offering you the following. Email me to pick up supplies, or with any questions about this pamphlet (I'm happy to discuss all the science), or if you need it in large print or a different font: helen.cook@gmail.com

- Pick up a box of 5 FFP2 masks for free from me
- Borrow a CO_2 meter for an event or to see how quickly CO_2 accumulates indoors
- Borrow air filters for an event (280 cfm MERV-13, 3 available)
- Help you choose or make air filters to fit your space (help is free, materials at cost)
- Access covid testing on a Pluslife accurate molecular testing device (suggested donation of £5/test)
- Join the Cambridge Care Collective, an online pan-disability peer-support group that meets on Mondays at noon camcarecollective.org

Do not buy masks from Amazon, they have been a lot of reports of counterfeits being sold cheaply, instead buy masks online from thefacemaskstore.co.uk.

References

Adler-Bolton, Beatrice. Health Communism. (Verso, London New York, 2022).

Al-Aly, Z. et al. Long COVID science, research and policy. Nat Med 30, 2148–2164 (2024).

Altmann, D. M., Whettlock, E. M., Liu, S., Arachchillage, D. J. & Boyton, R. J. The immunology of long COVID. Nat Rev Immunol 23, 618–634 (2023).

BBC. Excess deaths in 2022 among worst in 50 years. https://www.bbc.co.uk/news/health-64209221 (2023).

BBC. The Long Haul of Long Covid, https://www.bbc.co.uk/programmes/w3ct56hd (2023).

BBC. Patients facing two-day waits in A&E. https://www.bbc.co.uk/news/articles/cm2elw4dwx0o (2025).

BBC. Vallance says Eat Out to Help Out scheme likely increased Covid deaths. https://www.bbc.co.uk/news/live/uk-politics-67451422.

BHF. Excess deaths involving cardiovascular disease: an analysis. https://www.bhf.org.uk/what-we-do/policy-and-public-affairs/excess-deaths-involving-cardiovascular-disease-an-analysis (2023).

Bartsch, S. M. et al. The Current and Future Burden of Long COVID in the United States (U.S.). The Journal of Infectious Diseases jiaf030 (2025) doi:10.1093/infdis/jiaf030.

Bonilla, H. et al. Therapeutic trials for long COVID-19: A call to action from the interventions taskforce of the RECOVER initiative. Front. Immunol. 14, 1129459 (2023).

Bowe, B., Xie, Y. & Al-Aly, Z. Acute and postacute sequelae associated with SARS-CoV-2 reinfection. Nat Med 28, 2398–2405 (2022).

Brustad, N. et al. Burden of Infections in Early Life and Risk of Infections and Systemic Antibiotics Use in Childhood. JAMA Netw Open 8, e2453284 (2025).

CNN. We 'have our head in the sand': Health experts warn US isn't reacting fast enough to threat of bird flu. https://edition.cnn.com/2024/12/27/health/cdc-bird-flu-virus-mutations-analysis/ (2024).

Caini, S. et al. Probable extinction of influenza B/Yamagata and its public health implications: a systematic literature review and assessment of global surveillance databases. The Lancet Microbe 5, 100851 (2024).

Castellino, N. et al. COVID-19-related retinal microvasculopathy and systemic implications in patients with severe disease: results from the Methuselah study. Front. Med. 11, 1294432 (2024).

Colby, S. & Shah, R. TB reactivation following COVID-19 infection. Chest 162, A329 (2022).

Corsi-Rosenthal Foundation UK. Clean Indoor Air saves lives. https://corsirosenthalfoundation.org.uk/ (2025).

Davis, H. E., McCorkell, L., Vogel, J. M. & Topol, E. J. Long COVID: major findings, mechanisms and recommendations. Nat Rev Microbiol 21, 133–146 (2023).

Dempsey, B. et al. Post COVID-19 syndrome among 5248 healthcare workers in England: longitudinal findings from NHS CHECK. Occup Environ Med 81, 471–479 (2024).

Edlow, A. G., Castro, V. M., Shook, L. L., Kaimal, A. J. & Perlis, R. H. Neurodevelopmental Outcomes at 1 Year in Infants of Mothers Who Tested Positive for SARS-CoV-2 During Pregnancy. JAMA Netw Open 5, e2215787 (2022).

Ehsanifar, M. Airborne aerosols particles and COVID-19 transition. Environmental Research 200, 111752 (2021).

Evans, R. A. et al. Impact of COVID-19 on immunocompromised populations during the Omicron era: insights from the observational population-based INFORM study. The Lancet Regional Health - Europe 35, 100747 (2023).

Ferris, M. et al. FFP3 respirators protect healthcare workers against infection with SARS-CoV-2. Preprint at https://doi.org/10.22541/au.162454911.17263721/v2 (2021).

Galofré-Vilà, G., McKee, M., Gómez-León, M. & Stuckler, D. The 1918 Influenza Pandemic and the Rise of Italian Fascism: A Cross-City Quantitative and Historical Text Qualitative Analysis. Am J Public Health 112, 242–247 (2022).

Gibson, K., Ling, J. C. C. & Peters, M. Experience of sudden sensorineural hearing loss following a mild COVID-19 infection. BMJ Case Rep 16, e252899 (2023).

gov.uk. Pupil Attendance in Schools. Pupil attendance in schools https://explore-education-statistics.service.gov.uk/find-statistics/pupil-attendance-in-schools (2025).

Great Barrington Declaration. https://gbdeclaration.org/.

Guo, Z. et al. Association between situs inversus and maternal SARS-CoV-2 infection at gestational age 4–6 weeks. Med 5, 1433-1441.e3 (2024).

Independent. NHS Hospitals reintroduce face mask requirement as soaring flu cases see critical incidents declared. https://www.independent.co.uk/news/health/nhs-face-masks-hospital-flu-b2673524.html (2025).

Independent SAGE. Reports. https://independentsage.org/reports (2024).

Jahankhani, K., Ahangari, F., Adcock, I. M. & Mortaz, E. Possible cancer-causing capacity of COVID-19: Is SARS-CoV-2 an oncogenic agent? Biochimie 213, 130–138 (2023).

Karraker, A. & Latham, K. In Sickness and in Health? Physical Illness as a Risk Factor for Marital Dissolution in Later Life. J Health Soc Behav 56, 420–435 (2015).

Kedor, C. et al. A prospective observational study of post-COVID-19 chronic fatigue syndrome following the first pandemic wave in Germany and biomarkers associated with symptom severity. Nat Commun 13, 5104 (2022).

Kuper, H. & Smythe, T. Are people with disabilities at higher risk of COVID-19-related mortality?: a systematic review and meta-analysis. Public Health 222, 115–124 (2023).

Lancet Commission. Proposed Non-infectious Air Delivery Rates. https://healthybuildings.hsph.harvard.edu/research/infectious-disease/covid-19/lancet-covid-19-commission-task-force-on-safe-work-safe-school-and-safe-travel/ (2022).

Libby, P. & Lüscher, T. COVID-19 is, in the end, an endothelial disease. European Heart Journal 41, 3038–3044 (2020).

Lopez-Leon, S. et al. Long-COVID in children and adolescents: a systematic review and meta-analyses. Sci Rep 12, 9950 (2022).

Mirror. 'We need to do better' - over 14,000 people died with Covid after catching it in hospital. https://www.mirror.co.uk/news/uk-news/we-need-better-over-14000-28046576 (2023).

Morawska, L., Li, Y. & Salthammer, T. Lessons from the COVID-19 pandemic for ventilation and indoor air quality. Science 385, 396–401 (2024).

Mukherjee, S. et al. Vaccination prior to SARS-CoV-2 infection does not affect the neurologic manifestations of long COVID. Brain Communications 7, fcae448 (2024).

NERA. Infection Resilient Environments Social Cost Benefit Analysis. (2022).

NPR, Delta's CEO asked the CDC for a 5-day isolation. https://www.npr.org/2021/12/29/1068731487/delta-ceo-asks-cdc-to-cut-quarantine (2021).

Nguyen, D. C. et al. SARS-CoV-2-specific plasma cells are not durably established in the bone marrow long-lived compartment after mRNA vaccination. Nat Med (2024) doi:10.1038/s41591-024-03278-y.

ONS. Half a million more people are out of the labour force because of long-term sickness. https://www.ons.gov.uk/employmentandlabourmarket/peoplenotinwork/economicinactivity/articles/halfamillionmorepeopleareoutofthelabourforcebecauseoflongtermsickness/2022-11-10 (2022).

ONS. Prevalence of ongoing symptoms following coronavirus infection in the UK. https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/prevalenceofongoingsymptomsfollowingcoronaviruscovid19infectionintheuk/30march2023 (2023).

Onakpoya, I. J. et al. SARS-CoV-2 and the role of fomite transmission: a systematic review. F1000Res 10, 233 (2021).

PHW. PHW Weekly Acute Respiratory Infection Survey. https://phw.nhs.wales/topics/immunisation-and-vaccines/fluvaccine/weekly-influenza-and-acute-respiratory-infection-report/ (2025).

Peter, R. S. et al. Persistent symptoms and clinical findings in adults with post-acute sequelae of COVID-19/post-COVID-19 syndrome in the second year after acute infection: A population-based, nested case-control study. PLoS Med 22, e1004511 (2025).

Ponsford, M. J. et al. A Systematic Review and Meta-Analysis of Inpatient Mortality Associated With Nosocomial and Community COVID-19 Exposes the Vulnerability of Immunosuppressed Adults. Front. Immunol. 12, 744696 (2021).

Porter, C. K. et al. Clinical and functional assessment of SARS-CoV-2 sequelae among young marines – a panel study. The Lancet Regional Health - Americas 39, 100909 (2024).

Reuschl, A.-K. et al. Evolution of enhanced innate immune suppression by SARS-CoV-2 Omicron subvariants. Nat Microbiol 9, 451–463 (2024).

Scientific American. A Fight About Viruses in the Air Is Finally Over. Now It's Time for Healthy Venting. https://www.scientificamerican.com/article/a-fight-about-viruses-in-the-air-is-finally-over-now-its-time-for-healthy/ (2024).

Shah, D. P. et al. Sex Differences in Long COVID. JAMA Netw Open 8, e2455430 (2025).

Soni, A. et al. Performance of Rapid Antigen Tests to Detect Symptomatic and Asymptomatic SARS-CoV-2 Infection: A Prospective Cohort Study. Ann Intern Med 176, 975–982 (2023).

Soriano, J. B., Murthy, S., Marshall, J. C., Relan, P. & Diaz, J. V. A clinical case definition of post-COVID-19 condition by a Delphi consensus. The Lancet Infectious Diseases 22, e102–e107 (2022).

Stats Canada. Experiences of Canadians with long-term symptoms following COVID-19. https://www150.statcan.gc.ca/n1/pub/75-006-x/2023001/article/00015-eng.htm (2023).

Stephenson, T. et al. A 24-month National Cohort Study examining long-term effects of COVID-19 in children and young people. Commun Med 4, 255 (2024).

Taylor, Sunaura. Disabled Ecologies: Lessons from a Wounded Desert. (University of California Press, 2024).

The Atlantic. Fatigue Can Shatter a Person. https://www.theatlantic.com/health/archive/2023/07/chronic-fatigue-long-covid-symptoms/674834/ (2023).

UKHSA. Covid-19 Dashboard. https://ukhsa-dashboard.data.gov.uk/

respiratory-viruses/covid-19 (2024).

Vernon, S. D. et al. Incidence and Prevalence of Post-COVID-19 Myalgic Encephalomyelitis: A Report from the Observational RECOVER-Adult Study. J GEN INTERN MED (2025) doi:10.1007/s11606-024-09290-9.

Wang, J. et al. Trajectories of functional limitations, health-related quality of life and societal costs in individuals with long COVID: a population-based longitudinal cohort study. BMJ Open 14, e088538 (2024).

Wang, Q. et al. Alarming antibody evasion properties of rising SARS-CoV-2 BQ and XBB subvariants. Cell S0092-8674(22)01531–8 (2022) doi:10.1016/j.cell.2022.12.018.

Waters, A. Long covid: nearly half of doctors affected can no longer work full time, finds survey. BMJ p1529 (2023) doi:10.1136/bmj.p1529.

Williamson, E. J. et al. Factors associated with COVID-19-related death using OpenSAFELY. Nature 584, 430–436 (2020).

Wu, Q. et al. Altered Lipid Metabolism in Recovered SARS Patients Twelve Years after Infection. Sci Rep 7, 9110 (2017).

Yin, K. et al. Long COVID manifests with T cell dysregulation, inflammation and an uncoordinated adaptive immune response to SARS-CoV-2. Nat Immunol 25, 218–225 (2024).

YouTube. Physics Girl LIVE with Long Covid. https://www.youtube.com/@physicsgirl/streams (2024).

Yu, I. T. S. et al. Evidence of Airborne Transmission of the Severe Acute Respiratory Syndrome Virus. N Engl J Med 350, 1731–1739 (2004).

Zand, M. S. et al. Ventilation during COVID-19 in a school for students with intellectual and developmental disabilities (IDD). PLoS ONE 19, e0291840 (2024).

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I am a white, mid 40s, queer, disabled artist who grew up in Canada on the unceded land of the Semiahmoo and Musqueam people. I have formally studied math, philosophy, computer science, and I have a PhD in computational virology. After developing chronic illness, I now devote my time to studying art and the means of our continued existence on a just and finite planet.