Fast Facts -- Why Mask (Sept. 2023)

In brief (sources below): Cases are increasing. Most transmission is from people without any symptoms. The virus travels across a room in minutes. The HEPA in the classroom isn't cleaning the air enough (I've gotten CO2 readings of 1500 ppm; optimal air flow gets us closer to 500 ppm), so we're breathing each other's lung backwash! Vaccines reduce acute symptoms, but aren't enough to stop transmission. Almost one in five *cases* of Covid turns into Long Covid, and getting Covid just *once* increases the chances of getting it again because it attacks the immune system and brain. There's no cure for Long Covid and recovery is rare, so **all we have is prevention**. Luckily, well-fitting masks work really well to reduce the spread of transmission! If most people in a room are wearing N95s, *especially* when talking, it dramatically reduces the risk of infection to anyone in the room. Here's an upbeat 98 second Tiktok on masks if it helps.

IT'S STILL HERE

* Cases next door (in the states) are currently rising as high as 2020's peak (Prater, 2023). -- Notice that it's *finance* publications sounding the alarm! This will mess with the workforce and economy.
* Dr. Tam, Chief Public Health Officer of Canada, says get your masks *ready*, but it makes sense to mask *before* the numbers get high so you don't become one of the cases (Kirkey, 2023).
* Each infection *increases* the risk of reinfection (Breznik et al., 2023).
* It will never become like a cold or flu because its ability to bind to ACE2 receptors means it's far more destructive (Bear, 2023), and hibernates in the body like chicken pox, polio, and HIV viruses.
* It's still deadly: in Canada, Covid *currently* kills more than twice as many people as traffic collisions (over 81 Covid fatalities/week in the first half of 2023 vs an average 34 traffic fatalities weekly in 2021-22). The fastest rise is in people aged 0-44. Buckle up for safety, and mask it or casket!
* It's *evolving* to get better at attacking the immune system (Floersh, 2023).
* And you can catch Covid in less than 20 seconds of exposure (Iqbal, 2023 and Alsved, 2023), so just taking off a mask to sip coffee can risk getting it or *transmitting* Covid to someone else in the room now or later.

ASYMPTOMATIC SPREAD

* "59% of all SARS-CoV-2 infections result from asymptomatic transmission" (Georgetown, 2023), which is what makes it spread so well. Even if you've never been sick from it, you could still have it and be *giving* it to other people, harming them and their families (like Typhoid Mary).

MASKS REDUCE THE RISK (N95s/N100s are best, but any well-fitting mask at least *helps*)

* "The weight of evidence from all studies suggests that wearing masks, wearing higher quality masks (respirators like N95s), and mask mandates generally reduced the transmission of SARS-CoV-2 infection" (Royal Society, 2023, p. 29). There's been decades of evidence of their efficacy (Oliver, Ungrin, & Vipond, 2023).
* The Delphi Consensus, an international panel of 386 experts, agree by 96% that well-fitting masks **(N95s) are *necessary*** to reduce the public health threat of Covid transmission (Lazarus et al., 2022).
* **One-way masking is high risk**. There's a 90% risk of infection after 30 minutes in a surgical mask around an unmasked infected person, 20% with an N95 around an unmasked infected person, and down to just 0.4% risk if both people wear an N95 (Bagheri, 2021).
* Masks work by trapping particles with an electric field, not like a sieve (Minute Physics, 2020). They use four mechanisms to capture particles: inertial impaction, interception, diffusion, and electrostatic attraction (CDC, 2009).
* If you *hate* masks, it could be because you're wearing the wrong kind. Surgical masks move around, slide down the nose, and fog glasses because there's no seal. A well-fitting N95 stays in place. BUT it means we have to break the habit of eating and drinking continuously instead of at set times each day.

HEPA PLACEMENT

* To forgo masks, it's recommended to have 10 air changes/hour (ACH) in a room, which is possible with HEPA and CR boxes (Srikrishna, 2023). But for HEPA units to work, they must have at least 18" of

space around all sides, 2' is preferable. If it's in a corner and angled (perpendicular to both walls), then three out of four sides are blocked and ineffective (Heffernan, 2023). It should be centered in the room.
* Particles travel like smoke, moving across the room in minutes and hanging in the air for hours (El Païs, 2021). It can linger in the air in a room for up to 12 hours (Wang et al, 2021).

VACCINES MAINLY REDUCE ACUTE SYMPTOMS
* Vaccines reduce acute symptoms to keep you out of the hospital, but you can still get it and spread it, *and* still get Long Covid, although it cuts the risk of Long Covid a bit (Taylor, 2023). They wane in effectiveness within six months because there are so many different mutations out there right now, and it mutates quickly because we're *letting* it by openly transmitting it (La Grassa, 2023). Some people have caught Covid again just 16 days after an infection.
* The Delphi Consensus agrees 97% that **vaccines are not enough** to reduce transmission, and we need a vaccine *plus* strategy (Lazarus et al., 2022).

LONG COVID/PCC/PASC (illness that occurs 3 months post acute infection)
* Long Covid (*chronic* Covid) affects almost 20% of all *cases* of Covid. The CDC study pegged it at 19% (2023). One study found Long Covid in 18.2% of participants, almost all fully vaccinated (Woldegiorgis et al., 2023). Another study found Long Covid in 16.2% of children (Jiang et al., 2023). Another found persistent infection in 25% of asymptomatic children (John Snow, 2023).
* "**Recovery, unfortunately, is actually quite rare**" (Cooney, 2023).
* Covid is a vascular disease, creating micro-clots that stay in the bloodstream causing endothelial damage, and able to later harm many organs (the way chicken pox becomes shingles or HIV becomes AIDS) leading to chronic illness (Xu, Ilyas & Weng, 2022).
* The virus can cause brain cells to fuse together causing brain damage (Martínez-Mármol et al., 2023). We've known about the brain damage caused by Covid for years (Marshall, 2021), but euphemisms like 'brain fog' keep people from being concerned about this life-altering effect. It's just now hitting MSM that "It's really disruptive functionally; it's impairing, and it's disabling" (Michael, 2023).
* Like toxoplasmosis, Covid changes the host's personality, inducing higher trust in strangers and making them friendlier to help spread the virus further (Gambetta & Morisi, 2022).
* Even a mild case can affect longterm brain functioning, causing anxiety, depression, and fatigue (Da Costa et al., 2023).
* It can harm the immune system, leaving us vulnerable to other illnesses. Covid infection leads to a "prolonged alteration of circulating T, B, and NK cells and monocytes" (Zhang et al., 2023). Like AIDS, it depletes CD4 cells, leading to immune dysfunction or SARS-CoV-2 Associated Neurocognitive Disorders (SAND) (Bougakov, Podell & Goldberg, 2020).
* It's rare to recover within two years, so the number of people with Long Covid will accumulate (Mateu, 2023).
* Long Covid took away more healthy living years for people than cancer or heart disease, and there's no treatment for it. It will have a huge impact on the economy (Kuchler, 2023).
* Covid can directly affect the vagus nerve, an essential part of the autonomic nervous system affecting heart rate, blood pressure, etc. (Woo et al., 2023).
* Some imagery: Long Covid's like a never-ending series of software updates that keep making your phone glitchier. Each new wave is like another update, but instead of fixing things, it's adding more bugs; your battery life's dropping fast, and every wave makes it worse (Outbreaks Updates).
* And a sombre 73 second look at what Long Covid can be like, and a remarkably upbeat 75 second look at what inflammation can look like if it hits the eye socket.

There are lots more links to studies here and here.

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