

## Guide to INFECTION RISK & PROTECTION: COVID-19 Update

*The End is in Sight* by Dr. Richard Powers, DC (as of 8/20/20)

The following COVID-19 update is **NOT based on the “news” or social media posts**. Information from these sources may be skewed to align with specific financial or political agendas. Instead, my review is based on human physiology and sourced from the **most recent data and research** gleaned from peer-reviewed **medical publications** (e.g., *JAMA*); prestigious **scientific journals** (*Nature*; *Cell*); and from the impartial opinion of leading researchers, **Dr. M. Levitt** (Nobel Laureate); **Dr. J. Ioannidis** (Stanford Professor, Epidemiology/Biomedical Health Data); **Walter Willet, MD** (Harvard Professor of Epidemiology and Nutrition).

- ⇒ **People’s immunity to COVID-19 is far more prevalent than currently estimated**
- ⇒ **The fatality rate of COVID-19 is far less than originally predicted**
- ⇒ **COVID-19 infections pose the greatest risk to the elderly; the infirmed; the obese; and those on certain medications**
- ⇒ **The end is in sight for COVID-19 as herd immunity spreads across the United States**
- ⇒ **Clear, scientifically validated diet, lifestyle, nutrients, and natural medicine have been demonstrated to boost immunity.**

Now that we are nearing 7 months into the COVID-19 pandemic and much more viral “dust” has “settled” (spread), we have far more data and studies available around COVID-19; and with the data comes less assumptions and a greater understanding. The preponderance of scientific evidence suggests the following. (**SUMMARY** found on page 5; **RECOMMENDATIONS** on pages 5 & 6)

The current estimates of infection **death rate of COVID-19 appear now to be orders of magnitude LESS than originally predicted.**

- In quality-adjusted person-years lost, COVID-19 is about **1000x less severe than the 1918 Spanish Influenza outbreak**
- COVID-19 Infection death rate ranges from **almost 0% (under 45); 0.05-0.3% (45-70)**; and can go significantly higher from there (as morbidity probability skyrockets), with the **average age of death of 80 years.**

Note: Statistical data can be “noisy” or “messy” (inaccurate) until after a pandemic is nearly over and all cases and fatalities more accurately assessed and attributed. Some actual deaths from COVID-19 have not been included in the death count; as well as some that have been counted yet whose deaths weren’t actually caused by SARS-CoV-2. That said, it is more likely that the [total number of deaths attributed to COVID-19 may be significantly over-counted](#) (due to both data-gathering challenges and economic or political bias linked to COVID-19).

The vast majority of **COVID-19 deaths indeed are occurring in the *infection-prone, immune-compromised or immune-suppressed***:

- **Multiple medications** – those on drugs, especially ACE inhibitors – as they provoke an increase in ACE2 receptor density; PPIs – increase gut route of COVID-19 by 200-300% (American Journal of Gastroenterology); NSAIDs; acetaminophen
- **Multiple morbidities** – those with diabetes; high blood pressure; kidney or liver disease
- **Chronic lung conditions** – those with COPD; severe asthma; etc.
- **Immunosuppressed** – those taking steroids; chemotherapeutic drugs

NOTE: Flu vaccine may increase risk of COVID-19 mortality - “*vaccine derived virus interference was significantly associated with coronavirus ...*” ([Vaccine 2020;38 \(2\):350-354](#)); possibly due to adjuvants stimulating a hyperimmune response which may provoke or exacerbate a cytokine storm potentially increasing COVID-19 mortality risk.

... all of which are commonly seen in **nursing homes**, which uncoincidentally, has the **highest prevalence of COVID-19 mortality.**

**CHILDREN**: Despite claims to the contrary, children appear to remain far less vulnerable than adults. Some studies indicate that they do NOT spread the infection significantly more than adults. (Based on the evidence, perhaps it is safe and beneficial for children - at least in elementary/middle schools - to return to in-classroom study, with adults wearing masks; social distancing; and ideally, supplementing with Vit-D, zinc, and Vit-C; with additional immune support for more infection-prone teachers/staff/students.)

### **WILL THERE BE A SECOND “WAVE”?**

It makes sense that there is more likely to be viral persistence (e.g., a second “wave”) in locales who “open up” after employing the most restrictive “lockdowns.” More people returning to “circulation” implies a greater opportunity to spread viruses and become infected. (But, due to increasing prevalence of herd immunity, this does not necessarily translate into a “wave” of fatalities.)

### **DOES BLOOD TYPE, GENDER, or RACE IMPACT COVID-19 RISK?**

Blood type, gender, and race has been demonstrated to **NOT inherently increase an individual’s risk** or susceptibility to COVID-19.

- However, it may appear to be due to social stratification where specific populations (e.g., African-American) have a higher COVID-19 fatality incidence due to increased vulnerability attributed to more to diet and lifestyle habit than genetics.

### **HOW VIRULENT (“TOXIC”) IS SARS-CoV-2?**

- SARS-CoV-2 appears to be **genetically engineered** (genomic analysis reveals 6 codon “inserts”), which may account for its increased level of virulence compared to other more benign Coronaviruses, like those that may cause a “common cold.”

- SARS-CoV-2 appears to be more virulent than influenza viruses (generally) which is why severe COVID-19 infections tend to be more severe sometimes than a “bad flu” – more severe systemic effects and multi-organ/system involvement; and long lasting symptoms, (“long-haulers”) in about 15-20% of the cases.

The virus appears to have mutated to become:

- **More infectious** (G614) – which is beneficial as herd immunity is reached sooner as greater % of population becomes infected
- **Less lethal** than the original strain (D614) – so even those vulnerable have a better chance of survival after becoming infected.

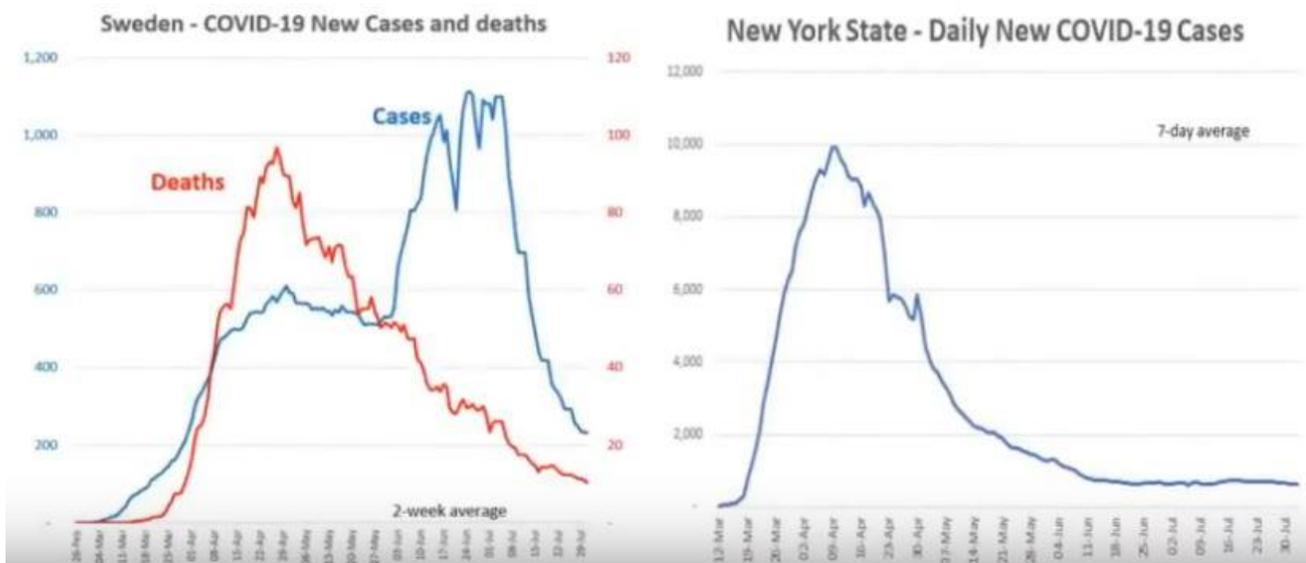
#### HERD IMMUNITY and COVID-19:

“Herd immunity” occurs when a sufficient portion of the population has been exposed to a virus and retains antibodies against it, thus curbing the ability of the virus to spread and infect others. It marks the beginning of the “end” of a pandemic.

Despite the statement that “*without a vaccine, researchers say, herd immunity may never be achieved*” (NPR; July 24, 2020), consider that ...

- Once the virus has “run its course” and infected about **50-80% of the population** (in an area), **herd immunity takes over** and both infection and death rates naturally and usually precipitously decline.
  - **40-60% of the population already has at least partial immunity** to the SARS-CoV-2 virus ... even if never exposed to it! (*Nature* and *Cell* publication references sited below)
  - **About 25-33% of US population may be already infected with SARS-CoV-2.** Using mathematical modeling from composite of data vs. via positive COVID-19 testing, Dr. Ioannidis estimates that 15-20x more people may be infected in the US than estimated (then the infection number could potentially be almost 100 million)
  - When about **13.5-20% of the population tests positive for antibodies, herd immunity is likely to occur**, based on emerging data and modeling (because far more people have been exposed and have antibodies than have been tested)
- We are likely nearing a prevalence of COVID-19 that is **approaching herd immunity** (quicker in areas that did not “lockdown”).
  - **Some locations in U.S. appear to have already reached herd immunity** (e.g., New York)
  - **Some countries also appear to have reached herd immunity** (e.g., Sweden)
    - Sweden did not employ an all-out lockdown
    - In mid-April the death rate was high, but 70% of the deaths occurred in (mis-managed) nursing homes
    - Headlines in USA Today, July 21, 2020, “Sweden hoped herd immunity would curb COVID-19. Don’t do what we did. It’s not working”)

Note below: Cases (not deaths) spiked in mid-July, but **by the end of July, the prevalence of cases and deaths from COVID-19 in Sweden was way down = Herd Immunity**

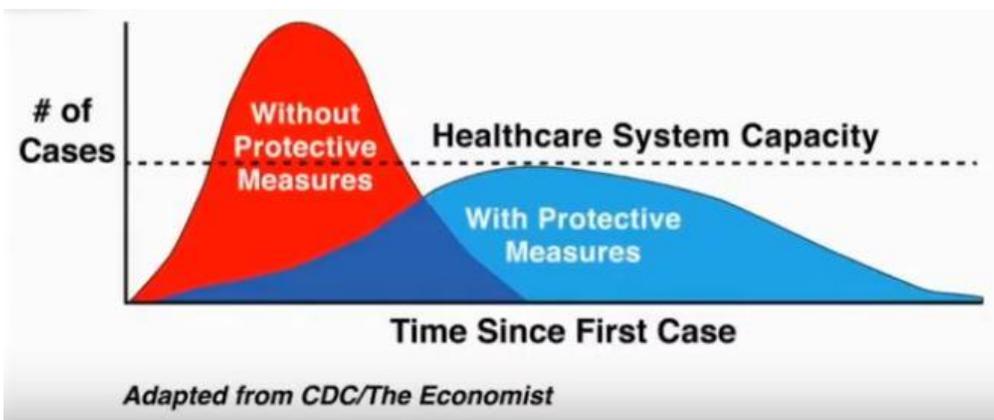


“Researchers concluded that **prior infection with other coronaviruses**, including those that cause the common cold, can produce multiple specific and long-lasting (up to 11 years) memory T cell effects that **impose immunity against** not only these viruses, but also **SARS-CoV-2.**” ([Nature; July 15, 2020](#))

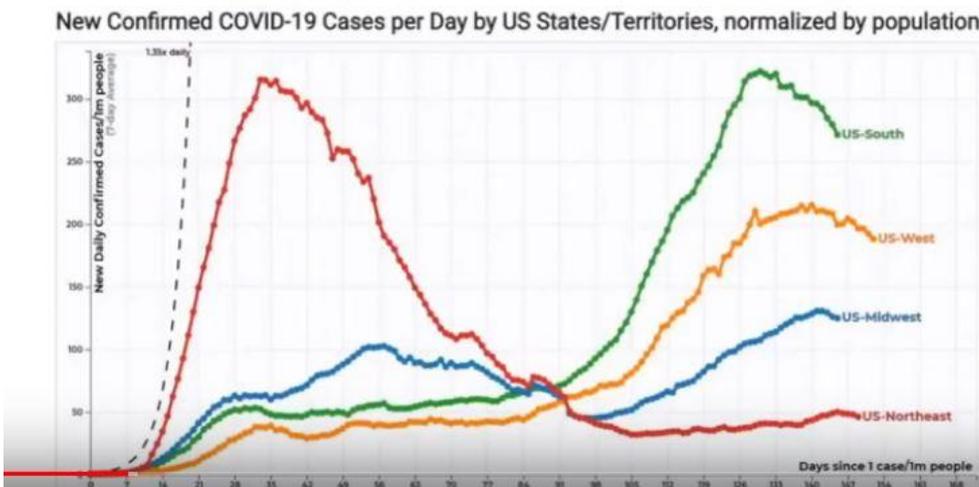
- **About 40-60% of U.S. population may have partial or complete cell-mediated immunity to SARS-CoV-2 prior to its appearance in 2019** ([Cell, May 14, 2020](#))
  - Immunity to a virus (e.g., SARS-CoV-2) is derived from either cell-mediated immunity (T-lymphocyte cells); and humoral-mediated immunity (B-cells forming antibodies).
  - CD4 T-cells reactive to SARS-CoV-2 found in about 40-60% of the blood samples collected from blood bank in San Diego from 2015-2018
  - Cross-reactive T-cell recognition between circulating “common cold” coronaviruses/SARS-CoV-1 and SARS-Cov-2 (COVID-19)

(Note: This may partially account for why about 4 of 5 people exposed to SARS-CoV-2 do not become ill or only mildly ill.)

- **Antibodies to SARS-CoV-2 (COVID-19) appear to and likely persist possibly for a year or more** UNLESS an individual’s immune response is subpar, as found in immunocompromised or immunosuppressed (via medication) persons.
- “Lockdowns” flatten the curve - which may have been potentially helpful in managing healthcare resources in a few specific locations/hospitals; but the number of cases and total deaths will likely be the same in the long-run. (area “*under the curve*”):

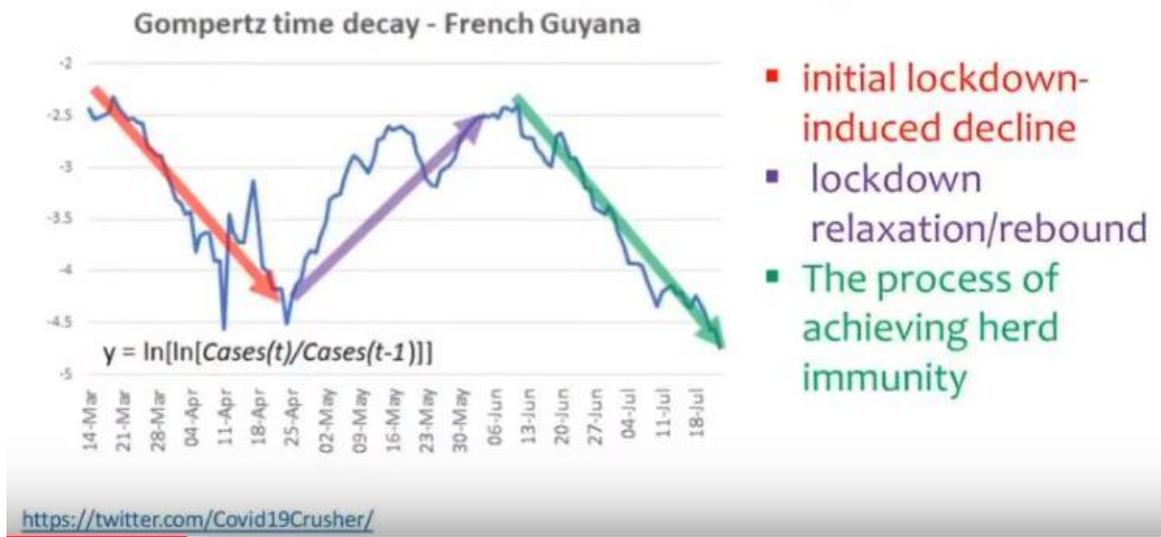


- “Lockdowns” delay the inevitable spread of infection, as seen in **NY/northeast in RED** (spread before any significant lockdown); and **FL/south in GREEN** (spreading after lockdown opens back up):



- Herd immunity (COVID-19) is occurring per **Gompertz Function Time Decay** mathematical models (ref: [Dr. Michael Levitt – Chemistry Nobel Laureate; Stanford Biophysicist Professor](#)). He states:
  - SARS-CoV-2 was never going to grow “exponentially” (even without a “lockdown”)
  - Instead, it actually slows down exponentially over time
  - [The lockdown saved no lives](#), particularly when weighing against lives lost due to the lockdown – increased suicide; drug overdose; increased global risk of [starvation](#); domestic abuse; divorce; alcoholism; and people (40% surveyed) not seeking medical care for fear of becoming infected ... let alone the severe economic and unemployment impact.
  - Masks and social-distancing would have been just as effective.

## Gompertz Function Time Decay Models Support Herd Immunity is Occurring



Many thanks to Dr. Michael Murray, ND, as much of the COVID-19 data/graphs/charts above were retrieved from his youtube presentation [here](#).

A **SUMMARY** of the latest COVID-19 findings is on the next page ...

## SUMMARY:

SARS-CoV-2 virus (COVID-19) will continue to spread and infect **but not to worry** as it is the nature of viruses to spread and infect – which is helpful to promote our collective **“herd” immunity**. Also, the virus has mutated to a less virulent (“lethal”) form which will also contribute to **less COVID-19 fatalities** over time.

The vast majority of SARS-CoV-2 viral infections/exposures **do NOT result in a serious or fatal outcome** (the infection fatality rate is far lower than initially estimated); and those who are at the highest risk for a severe infection are those who are most vulnerable:

- The oldest population (average age death for COVID-19 is 80 years) ... because by this age many have a **chronic disease** and/or are on **multiple medications**, especially **immunosuppressive medication**, ACE Inhibitors, regular use of NSAIDs, acetaminophen, or PPIs (proton pump inhibitors like for GERD, reflux, heartburn, indigestion).

### Remember:

⇒ Microbes are generally opportunistic, i.e., they require a “weakness” and a specific “environment” to proliferate.

⇒ Our **infection protection** is centered around a robust immunity and intact microbial barriers (skin; lung and gut linings).

### However, to help ensure your safety...

⇒ Although less virulent than originally estimated, SARS-CoV-2 infections can still be dangerous to those more vulnerable. If you are unsure of your degree of vulnerability (or opt to be pro-active), **be safe and follow the guidelines below in yellow.**

## The end of COVID-19 is in sight.

- Many people are immune to SARS-CoV-2: Far more people have been infected with (exposed to) SARS-CoV-2 and/or have (pre-COVID-19) immunity to the SARS-CoV-2 virus than current estimates indicate.
- Herd Immunity is occurring: Herd Immunity has occurred in some locales (like NY), while other areas are getting closer; and based on the least biased expert interpretations of the current data ...

*“I suspect that by the time a properly tested vaccine proven safe and effective becomes available (if it does), herd immunity may have already occurred in much of if not most of the U.S.”* Dr. Richard Powers

## COVID-19 Vaccine may be Unsafe or Ineffective:

**UNSAFE?** Beyond the concern around **fast-tracking** a COVID-19 vaccine (which implies **skipping steps put in place to ensure safety and efficacy!**), the people most at risk for a severe reaction to SARS-CoV-2 are the same population that **may react adversely to the adjuvants added to the vaccine**. (Adjuvants are substances added to stimulate an immune response to the vaccine’s viral antigens; however, this could potentially back-fire, resulting in an over-stimulated immune response, e.g., a cytokine storm, which has been linked to **more severe or fatal COVID-19 outcomes**.)

**INEFFECTIVE?** A vaccine’s potential effectiveness depends on its ability to provoke an immune response (antibody production). Research suggests that **chronic inflammation** (an immune problem) **hampers the vaccine’s efficacy**. This means that **1 in every 3 (and potentially 2 out of 3) adults in the U.S. may not receive any protection from a COVID-19 vaccination** just from the fact that they are chronically inflamed from obesity or from their chronic disease (e.g., heart disease; diabetes; cancer; autoimmune disease; COPD; asthma; kidney disease; fatty liver; high blood pressure).

## BE SAFE! The safest and most effective pro-active measures to protect yourself from infection still remain:

Don’t worry ... and take action to boost your immunity!

- **Think right** – count your blessings; lend a hand to others in need; and associate with positive, optimistic, kind individuals
- **Eat, sleep, move** in ways that promote vitality and **boost immunity**.
- **Back up those actions with a few key immune-supportive supplements** (many of which have demonstrated potential efficacy against SARS-CoV-2). Consider a **phased immune-supportive approach**: (consistent with findings in [JAMA, July 24, 2020](#))
  - Prevention and during infection: General immune support, e.g., [Vit-D; Zinc; Vit-C \(in IMMUNE PAX\); NAC](#)
  - Early stage infection: Interferon-gamma immune boost, e.g., [Viragraphis/Immunotix \(in IMMUNE PAX\); Th-1 Support](#)
  - Later stage/infection: Anti-inflammatory immune support, e.g., [Nrf2-Activator; Curcuplex 95](#)

Reduce your viral exposure:

- **Wash your hands** frequently with soap (20-30 seconds)
  - Better to avoid antibacterial cleansers as they also kill the good, protective skin bacteria (if you use an antibacterial cleanser, an ethyl alcohol-based cleanser is a safer option)
- **Wear a face mask and social-distance** when in a public environment, particularly in crowded areas, hospitals, and nursing homes! ... and/or as mandated by your community. To be extra cautious:
  - Periodically move away from others and remove your face mask (every hour or so) to get some “fresh” air
  - Consider not re-using the same mask without cleaning it (at least periodically)

For more information on how to **BOOST IMMUNITY** via **Diet, Lifestyle and Supplementation**, read the next page ...

## How do you boost your immunity? (natural resistance)

Inarguably, what you think and do, day in and day out, has been shown to have everything to do with both your overall health and well-being, and your immunity.

Nutrient insufficiencies; sedentary lifestyles; disturbed sleep; toxic body burden; and chronic or recurring stress; weakens immune function and opens the door to infection (viral; bacterial; fungal).

Research shows that ***eating well, ensuring optimal nutrient levels; moving often, sleeping soundly, de-toxifying, and stressing less*** ***ALL promote a strong and swift immune response*** to potential pathogens; thus, reducing the risk for and severity of infection (bacterial and viral).

Finally, many different types of ***natural medicine are available to help boost one's natural immune response*** (or for their anti-viral properties), and thereby reducing one's risk of infection, or accelerating recovery when infected.

### Here's how to boost your immunity and natural resistance:

- **Remain centered** – try and maintain perspective. You are likely still safe so feel grateful, relax, breathe, be present, pet your dog or cat, read something inspiring, play or listen to some of your favorite music, laugh, and lend a helping hand to someone in need or less fortunate. Conversely, Dr. Bruce Lipton, in *Biology of Belief*, scientifically explains how fear actually fuels illness and infection.
- **Stay hydrated** – frequently drinking a little water: (purified; room-temp, warm, or hot)
  - Provides the body with its second most precious commodity (air is #1) required for innumerable metabolic pathways, including ones related to immunity.
  - May help flush recently acquired viruses in your mouth/throat into your stomach (rendered harmless by stomach acid), instead of being subsequently inhaled into respiratory system where respiratory viruses do their worst.
- **Get out in the sunlight** – boosts Vit-D production; most viruses don't survive well in heat which is one of the reasons why the body generates a fever to combat viral infections; also consider far-infrared Sauna therapy for both thermal and detox effect.
- **Improve Diet & Lifestyle choices** (and de-toxify and stress less) – all help to improve vitality and immunity.
  - Eat well: More green leafy and colorful vegetables and healthy fats; less sugar and refined, processed products.
  - Move often: Walk and stand more; sit less; get pulse up; stretch and breathe (Yoga; Tai Chi; Qi Gong).
  - Sleep soundly: Sleep in a dark room; turn off all electronics at least 30 minutes before bed; minimize evening snacking.

***Opportunity knocks!*** Perhaps view the current COVID-19 infection risk as a wake-up call to ramp up your commitment to more consistently ***implement the dietary and exercise changes*** you have been thinking about doing but never did (routinely). ***Any*** changes (to ***eat better; move more***) helps your body/immune system work more effectively to help prevent and resist infection.

- **Optimize nutrition** (vitamins; minerals; omega-3 fats; etc.) – [Walter Willet, MD \(Harvard Prof.\)](#) agrees that ***sufficiency of all nutrients is important, especially if you may be infected by SARS-CoV-2***; and we know Vitamins C and D, Zinc, as well as omega-3 fats (EPA/DHA), are particularly critical for optimal immune function and response. Supplementation is generally required for most people to ensure optimal nutrient sufficiency.
- **Consider natural medicine support** – to offer immune support by either:
  - Facilitating immune response, e.g., helps body quickly identify or destroy pathogens (to reduce infection risk or severity)
  - Providing anti-microbial activity, e.g., helps target and kill pathogenic viruses and/or bacteria

***Here are a sample of several safe, proven, and effective natural immunity boosters demonstrating efficacy with respiratory viruses:***

Contained within **Dr. Powers IMMUNE PAX**

- ⇒ ***Whole Particle Beta glucan*** (WPG) – activates immune system by “priming” immune cells (macrophages; neutrophils) ([Int J Immunopharmacol](#))
- ⇒ ***Immunoglobulins*** – via serum or hyperimmune egg powder confer passive immunity ([Alt & Comp Ther](#))
- ⇒ ***Andrographis*** – inhibits viral replication ([Archives of Virology](#)) (Note: Not tested against COVID-19 virus)
- + add some ...
- ⇒ ***Zinc lozenges*** – zinc gluconate lozenges helps [resist infection](#); possibly [Coronavirus](#); and promotes frequent swallowing.

To access [Dr. Powers IMMUNESUPPORT - specific guidelines and immune-boosting supplements](#) to safely and effectively reduce your infection risk, charge up your immunity, and facilitate your recovery (if you become ill), [click here](#).