

**How to Protect Yourself from COVID-19**  
**College of Complexes, Saturday, July 25th at 6:00 PM**  
**Speaker: Dr. Lora Chamberlain, D.O.**

Disclaimer: Nothing in this lecture or in the accompanying notes should be considered personal medical advice. All of it is for educational purposes. Discuss all of this information with your medical provider to determine if any of it applies to you. I am presenting the research that has impressed me, and the protocols that I am using to stay well in this time of COVID.

**Basic facts about SARS-COV-2:**

- **Primarily transmitted via respiratory droplets to the nose and mouth, but also via the eyes.**
- **Swallowing respiratory droplets allows the virus to invade the gut.**
- **Fecal / oral route – with close contacts, beware public toilets – wear your masks, wash your hands, disinfectants and disinfectant wipes (H<sub>2</sub>O<sub>2</sub>, Witch Hazel, 10% Chlorine Bleach)**
- **Many studies of transmission of COVID-19 have shown that approximately 10 – 40% of close contacts of positive COVID patients, (extremely close contact, (within 3 ft), unmasked, in enclosed spaces), are getting the disease – this is the primary route of infection!**
- **Not many documented cases of transmission via infected packages, but still stay safe – wash your hands**

RO – 2.5

Secondary Attack Rates:

- Overall 5%
- Passing Interaction Via Shopping 0.5%
- Sharing a meal indoors 7%
- Household contacts 10 - 40%

**Asymptomatic rate of infection worldwide is approximately 40% of COVID positive patients – so there is a huge reservoir of SARS-COV-2 + people walking around in public, not knowing they are carriers of the virus. This is one of the reasons why COVID-19 is a pandemic.**

**Face Masks – wear them!**

65 – 95% of virus particles are filtered out by masks depending on what type of mask you are wearing - 2 layered pleated cloth masks were found to be better than bandannas, the blue paper surgical masks are recommended - they are lighter, cooler, inexpensive. I use the blue paper surgical masks the majority of the time - easy to take up and down – outdoor face mask use is only when I am close to other humans.

- Masks allow for flattening of the curve of transmission and keeps death rates lower. They also allow for the cutting of the inoculate size taken in by mouth or nose, this is very important – smaller inoculate decreases your chance of getting the disease, and if you get the disease the severity is less.
- Masking increases the % of people who end up with an asymptomatic or low symptom cases, cutting morbidity! (No convincing evidence of re-infection!)
- 80% of the population need to mask to get population-wide benefits.
- Experts agree that widespread mask wearing might be as effective as lock downs in controlling the virus, and could get pandemic under control in 4-6-8 weeks – CDC reported this on July 14<sup>th</sup>.
- N-95 masks should be left for medical personnel, cloth masks and blue surgical masks are sufficient for the public. Valve masks allow the exhalation of viruses, N-99. N-100.

- Wearing masks outdoors, transmission is very low in ventilated outdoor areas – I still wear one when I am close to any human. I walk 6ft - 10ft away from joggers without masks / cough-ers.

<https://www.lung.org/blog/covid-masks>

### **Do Masks Cause Low Oxygen Levels?**

“Absolutely not. We wear masks all day long in the hospital. The masks are designed to be breathed through and there is no evidence that low oxygen levels occur. There is some evidence, however, that prolonged use of N-95 masks in patients with preexisting lung disease could cause some build-up of carbon dioxide levels in the body. People with preexisting lung problems should discuss mask wearing concerns with their health care providers. There is absolutely no scientific evidence that mask wearing or physical distancing weakens the immune system.”

### **Covid-19: How the Virus Gets in and How to Block It: Aerosols, Droplets, Masks, Face Shields, & More lecture produced by UCSF (very detailed lecture about transmission of Sars-COV-2)**

<https://www.youtube.com/watch?v=Cio3rh6ta3w>

### **The Fight over Face Masks Escalates | Data vs. Belief**

<https://www.peoplespharmacy.com/articles/the-fight-over-face-masks-escalates-data-vs-belief>

The information below is from [ChrisMasterjohnPhD.Com](http://ChrisMasterjohnPhD.Com) - PhD in Nutritional Sciences.

### **Development of a Dose-Response Model for SARS Coronavirus**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7169223/>

These studies suggest the median dose of SARS COV 2 viral particles required for infection is 280 “plaque-forming units,” (PFU) while 10 percent of people could get infected with as little as 43 PFU.

The authors of the [preprint](#) released 7.16.20 ,

<https://www.medrxiv.org/content/10.1101/2020.07.16.20155572v1>

estimate that it takes 10 virus particles to make one PFU, so this would mean that **10% of people could be infected by 430 particles while the median infectious dose would be 2800 particles**. These authors, however, use data from the first SARS virus and the flu to estimate that the infectious dose would be between 100 and 1000 particles.

This preprint, released by physicists, virologists, and physicians from Amsterdam, used healthy people in an experiment to model how speaking and coughing release large droplets and aerosols in a closed environment.

**98% of the spray from a cough goes into large droplets that are 100 to 1000 micrometers. The remaining 2% goes into smaller microdroplets. The smaller the microdroplet, the longer it can stay in the air, and it is very small microdroplets that aerosolize and become airborne.**

Using the typical concentrations of SARS-CoV-2 in saliva and sputum, they estimated that if a single person coughed once in a small enclosed space that was 2x2x2 cubic meters (one meter is 3.3 feet), airborne virus particles would be so few and far between that one would have to spend **12 minutes** in the environment to risk getting infected, and that the maximal number of viral particles one could inhale from that single cough would be **120**, which is unlikely to be sufficient to get most people sick, but might infect a small proportion of people.

With lots of people in a closed environment, the probability of there being more than one cough, and perhaps many coughs, goes up. **Limiting the number of people who enter an enclosed environment per unit time would decrease that probability. Ventilating the room would decrease the**

**probability by increasing the likelihood that the few aerosolized droplets released from a given cough are removed from the room.**

Saying the words “stay healthy” 230 times produces the same volume of aerosolized liquid as coughing once. So, people speaking for great lengths indoors can transmit as effectively as people occasionally coughing.

These results suggest that, **while open air is quite safe (unless you are close enough for someone to cough on you)**, enclosed environments can be dangerous if people are coughing frequently or constantly speaking. To minimize transmission in such a closed environment you would want each cough that takes place in a 2x2x2 cubic meter environment to be matched by fewer than 12 person-minutes (the number of people times the number of minutes spent).

**It supports the general principle that in enclosed environments you would want to keep out people who know they are coughing, while limiting the number of people to prevent overcrowding, as well as the length of time for which people are staying indoors.**

**How protective would masks be? At a minimum, they would likely stop most of the 98% of liquid that yields large droplets of 100 to 1000 micrometers.**

**You can clean the face masks and reuse them** - I have been hanging my face masks on a hanger in the air, away from the main part of my home, for 10 days before I go back to use it again - I date all of my masks so I know for sure how long it has been hanging. But if you have to use your mask again quickly, the best way to clean it, that protects the integrity of the mask, for the most number of uses, seems to be low heating in your oven for 30 minutes at 158 degrees Fahrenheit (70 degrees Celsius). Watch your ovens closely while doing this but it seems to be the best way to clean your mask quickly - more info here: <https://www.livescience.com/sanitizing-medical-masks-for-reuse-coronavirus.html>

**Air Traffic is still a very, very high risk activity** – even with HEPA filters on the planes, if someone sitting next to you is transmitting the virus the plane's air ventilation is not going to be protective for you. Delta is the only airline saying it will keep the aisle seats empty.

**Remember your eyes! Protective eye ware is extremely important in high risk activities – check hardware stores for eye protection for occupational hazards – I use swimming goggles.**

**Antibody tests:**

There is so much confusion and frankly out right fraud about Antibody tests. \$250 - \$700 a test, some insurances cover them, some do not, some only cover 1 test.

From all of the prior research on the original SARS virus, it appears that Antibodies to COVID-19 will probably offer some level of protection against SARS COV2 for at least 3 months but maybe longer. Even so, it is helpful to know if you are Antibody positive, especially if you are working as a front line or essential worker, or taking care of the elderly or vulnerable.

The antibody test is one of those that is helpful when it is positive, but if it is negative it is not helpful at all - you might not have been exposed to the virus yet, or you might still be recovering from the virus and have not developed a significant amount of the antibodies yet. Some hospitals have developed their own Antibody tests and it would be important to ask your doctor about the specificity and sensitivity of these tests before they order them. Cellex, a biotech company from North Carolina, was the first to get FDA approval of their antibody test: <https://abc11.com/antibody-test-for-covid-19-ohio-kit-cellex-stock-coronavirus/6087453/>

And Roche was the 2nd company to get FDA approval for their Antibody test - it has a very high specificity and sensitivity - therefore it is a good one: <https://www.bloomberg.com/news/articles/2020-05-03/roche-s-covid-19-antibody-test-gets-fda-emergency-use-approval>

**Post-illness antibodies are helpful but may not remain circulating in blood for greater than 3 months even though this does not appear to impact immunity to this virus, more researchers are focusing on T-cell Mediated Immunity – new findings have narrowed down major paths of immunity to Sars-COV-2:**

A peer-reviewed paper <https://www.nature.com/articles/s41586-020-2550-z> published in *Nature* 15 July 2020 using subjects from Singapore provided three key findings:

- All of the 36 subjects who had recovered from mild or severe COVID-19 had virus-specific T-cells.
- All of the 23 subjects who had recovered from SARS 17 years ago still produced T cells specific to SARS, and in all cases they were cross-reactive for SARS-CoV-2, the coronavirus that causes COVID-19, and capable of expanding and activating in response to protein fragments from SARS-CoV-2.
- Half of the 37 subjects who were unexposed had existing T cell immunity to COVID-19, that could *not* be explained by exposure to coronaviruses that cause the common cold and *might* instead be explained by exposure to other coronaviruses harbored by animals.

Children are fairly protected against COVID: Increased Nat. Killer cells, decreased ACE2 receptors and a primed Innate Immune System.

Adults fall into 1 of 4 groups with their immune reactions to COVID:

- 1) Follow T-Helper 2 to B Cell dominant pathway, they make antibodies
- 2) Follow T-Helper 1 to Cytotoxic T Cells and Cytokine Storm
- 3) Follow B-Cell pathway without T Cell activation, they make antibodies
- 4) No lymphocyte response at all

**Some details about infectivity and testing – here is a proposal to get kids back in school and still keep everyone safe – rapid PCR tests with low sensitivity are cheap and fast, (strips of paper that you spit on), these may be the ticket to keeping our schools and workplaces safe – the key is that we do NOT have to detect every single particle of virus, we just need to know when people are the most infective, those spreading the largest number of virus laden droplets: “Coronavirus Pandemic Update 98: At Home COVID-19 Testing - A Possible Breakthrough”**  
[https://www.youtube.com/watch?v=h7Sv\\_pS8MgQ](https://www.youtube.com/watch?v=h7Sv_pS8MgQ)

**There has not been a lab proven case of reinfection by SARS-COV-2 yet in the world – this is good news. But there are many cases of “long-haulers” where there is persistent virus or viral particles in the blood, and many cases of persistent symptoms – I have read many cases where doctors are giving Hydroxychloroquine / Zinc to clear the virus or oral Steroids to calm a persistent dis-regulated immune system.**

***Our immunity, nutritional, and health status makes a huge difference on whether we will get COVID-19, and whether we will have a NO, MILD or SEVERE course.***

## **Risk Factors:**

Get Healthy, Exercise, Lose Weight, Kick the sugar and the salty snacks, stop the alcohol and smoking, eat a varied, organic diet with plenty of greens and veggies: <https://www.youtube.com/watch?v=COI3zYHf-nI&t=912s>

Control Your Blood Sugar! Get your daily sun. Stop watching the Lame Stream Media.

ABO blood group, **A** slightly more at risk, **O** slightly protective, Vit D status, G6PD deficiencies – Mediterranean heritage, Racial disparities, could be related to Vit D deficiencies. Do you own a dog? – They might be protecting you!

Risk of COVID Mortality Calculator with co morbidities:

<https://www.omnicalculator.com/health/covid-mortality-risk>

**Prevention:** Here is a video with Dr. Seheult, a CA Pulmonologist, working with COVID-19 patients, talking about what he is doing to protect his health, and the health of his family. If you are still sitting on the fence about taking supplements I would highly recommend that you consider doing what he is doing: <https://www.youtube.com/watch?v=NM2A2xNLWR4&t=97s>

All of his COVID educational videos are a great way to keep up with the latest research:

<https://www.youtube.com/c/Medcram/videos>

Dr. Been is also a clinician and medical educator – his You Tube videos about COVID are excellent and he has excellent diagrams: <https://www.youtube.com/user/USMLEOnline>

## **VIT C – I take 1000mg twice daily and will increase it to 1000 mg 4 times daily if I get sick**

Here is Dr. Mercola's latest video about nutritional advice, including Vit C, pertaining to prevention of Coronavirus - I highly recommend watching it:

<https://articles.mercola.com/sites/articles/archive/2020/03/29/andrew-saul-vitamin-c.aspx>

The take-a-ways from this video are:

"Intravenous vitamin C in high doses is being used both in China and in intensive care units in New York because: Patients already ill from Covid-19 do better when adding vitamin C to their treatments. Vit C enhances the functions of Steroids to quiet down a dis-regulated immune system.

–Patients who had been using vitamin C before they became ill had better outcomes than those who had not...Studies have shown that even 200 mg of vitamin C a day will reduce the death rate in elderly people with severe pneumonia by 80%. Studies have shown babies with pneumonia, when they get 200 milligrams of vitamin C — the adult equivalent of about 2,000 to 3,000 mg — they have an improvement in their oxygen levels in less than a day. The mortality goes down and the duration and severity of the illness is less."

## **Here is more information about Vit C:**

New York hospitals treating coronavirus patients with vitamin C: <https://nypost.com/2020/03/24/new-york-hospitals-treating-coronavirus-patients-with-vitamin-c/>

<http://www.doctoryourself.com/index.html>

<http://www.orthomolecular.org/resources/omns/v16n19.shtml>

<https://lpi.oregonstate.edu/mic/vitamins/vitamin-C/supplemental-forms>

Liposomal Vit C is the most bioavailable form of Vit C but it has to be bought on line, or at specialty care offices such as Whole Health Chicago, and it is very expensive - for the average person Liposomal Vit C is not necessary: <https://www.consumerhealthdigest.com/health-supplements/liposomal-vitamin-c.html> But if you would like to try Liposomal Vit C and can't afford it then here is a DIY video - follow the instructions carefully: **How to Make Liposomal Vitamin C At Home (Homemade Lipo-spheric Sodium Ascorbate Recipe)** <https://organicbiomama.com/homemade-liposomal-vitamin-c-recipe>

### **Vit D – I took 10,000 IUs for 60 days (March - April) and have now dropped to 5000 IUs a day, I get sun everyday:**

Vit D, when activated, is really a hormone affecting many biochemical pathways (over 1000) with impacts on our immunity and general health. It even affects pathways that stabilize our endothelial cells to prevent the micro-embolic activation that occurs in COVID. Besides age and co-morbidities, Vit D deficiencies are turning out to be a hugely important co-factor as to why some people get severe COVID, and possibly die, (such as the high rates among Blacks and Latin X).

<https://www.ibtimes.com/coronavirus-update-scientists-link-vitamin-d-deficiencies-higher-risk-dying-sars-cov-2969671>

**Higher blood levels of Vitamin D have been correlated in 3 large studies with a much lower death rate from COVID-19. If your blood level of 25(OH)D is greater than 34 ng/ml your risk of death from COVID is almost zero!**

**Your goal is to attain Vit D levels of 45 – 60 ng/ml for protection from COVID, and other health risks such as Cancer. 40% of the entire human population have blood levels less than 20 ng/ml, 60 % have levels less than 30 ng/ml.**

**Nutrients Review of Vitamin D** | <https://www.mdpi.com/2072-6643/12/7/2097> Great physician review of all of the info in the above paper: <https://www.youtube.com/watch?v=Mdc7T2UTHBI>

**Vitamin D supplements:**

**Are yours helping or hurting you?** <https://www.precisionnutrition.com/stop-vitamin-d>

Vitamin D is essential for good health, bone and muscle health, immunity, CV health. Many people have low blood levels of vitamin D, especially in winter or if confined indoors, because summer sunshine is the main source of vitamin D for most people. People of Color (POC) activate their Vit D much slower than Whites, so while they recommend Whites get 15 mins of sun a day, (preferably close to the noon hour, and exposing at least 30% of your skin - (you naked sun bathers have been at the forefront of health, and you didn't even know it). For POC it really takes 30 mins to a couple of hours of sun (preferably close to the noon hour and exposing 30% of your skin) for you to activate your optimum activated Vit D levels. This is why supplementation of Vit D is so important, with our cold and frequently cloudy environments in the northern regions, this requirement for sun is rarely obtained except during the warmer weather.

<https://www.healthline.com/nutrition/vitamin-d-from-sun#skin-color>

**Here is the skinny:**

You can ask your doctor for a 25(OH)D blood test and aim for achieving a level of 45 – 60 ng/ml in

advance of the winter months – to get there, if starting very low, 20 ng/ml, as is the case with many residents of Chicagoland (13% of the the population, the majority of the elderly and communities of color), then it will take 35 days of taking 10,000 IU every day, or 85 days of taking 4000 IU a day. Working with your doctor to obtain these blood tests and devising an individual supplementation regimen would be the best advice. And get some SUN without the sunscreen! I know that the sun is hot and supposed to be very bad for us BUT we must realize that we need some of it.

**Finally a major health institution is talking about this - the French National Academy of Medicine is now recommending Vit D supplementation as an adjunct regimen in the fight against COVID-19:** <https://www.youtube.com/watch?v=fIMkigt4nk4>

**More resources:**

**The role of Vitamin D in the prevention of coronavirus disease 2019 infection and mortality**

<https://doi.org/10.1007/s40520-020-01570-8>

“Vitamin D levels are severely low in the aging population especially in Spain, Italy and Switzerland. This is also the most vulnerable group of the population in relation to COVID-19.”

**Evidence that Vitamin D Supplementation Could Reduce Risk of Influenza and COVID-19 Infections and Deaths** <https://www.mdpi.com/2072-6643/12/4/988>

To reduce the risk of infection, it is recommended that people at risk of influenza and/or COVID-19 consider taking 10,000 IU/d of vitamin D<sub>3</sub> for a few weeks to rapidly raise 25(OH)D concentrations, followed by 5000 IU/d. The goal should be to raise 25(OH)D concentrations above 45–60 ng/mL (100–150 nmol/L). For treatment of people who become infected with COVID-19, higher vitamin D<sub>3</sub> doses might be useful in the out patient or in patient setting, 50,000 IU single dose to raise levels quickly.

***Vitamin D and SARS-CoV-2 virus/COVID-19 disease***

<https://nutrition.bmj.com/content/early/2020/06/10/bmjnph-2020-000089>

**Vitamin D: A Low-Hanging Fruit in COVID-19?**

“Overall, the correlation between low vitamin D levels and mortality from COVID-19 was statistically significant ( $P = .046$ ), the investigators report.” <https://www.medscape.com/viewarticle/930660>

**Coronavirus Pandemic Update 82: Racial Disparities with COVID-19 & Vitamin**

**D**<https://www.youtube.com/watch?v=bDt6ca2WF3Y> with Pulmonologist, Roger Seheult, MD

**Vitamin K is important for the functioning of Vit D, here is some information about it: "Vitamin K found in greens, butter, egg yolks and some cheeses, could help fight Covid-19, study suggests":**

<https://www.theguardian.com/science/2020/jun/05/vitamin-k-could-help-fight-coronavirus-study-suggests>

**Study links better vitamin K status with improved COVID-19 outcomes**

<https://www.nutritioninsight.com/news/study-links-better-vitamin-k-status-with-improved-covid-19->

[outcomes.html](#)

And below are two videos with the science underneath the need for Vit K, if you want to learn more:

[https://www.youtube.com/watch?v=G1YqdgI\\_Wwc](https://www.youtube.com/watch?v=G1YqdgI_Wwc)

[https://www.youtube.com/watch?v=hSbHkMb\\_FKI](https://www.youtube.com/watch?v=hSbHkMb_FKI)

**I personally think that Vit K is easy to get from my diet, I eat greens, butter, or egg yolks every day but many Vit D supplements include Vit K as well - here are the foods that are rich in Vit K:**  
<https://www.healthline.com/nutrition/foods-high-in-vitamin-k#section1>

**Zinc:** Zinc 50mg a day - which I will bump up to 200mg a day (1 tab, 4 times a day. with each meal and at bedtime) for 7-10 days at the first sign of any symptoms of COVID - 19. Zinc is essential to take if taking Hydroxychloroquine! <https://lpi.oregonstate.edu/mic/minerals/zinc#common-cold-treatment>

“Administration of Zn supplement has a potential to enhance antiviral immunity, both innate and humoral, and to restore depleted immune cell function or to improve normal immune cell function, in particular in immunocompromised or elderly patients. Zn may also act in a synergistic manner when co-administered with the standard antiviral therapy, as was demonstrated in patients with hepatitis C, HIV, and SARS-CoV-1. Effectiveness of Zn against a number of viral species is mainly realized through the physical processes, such as virus attachment, infection, and uncoating. Zn may also protect or stabilize the cell membrane which could contribute to blocking of the virus entry into the cell. On the other hand, it was demonstrated that Zn may inhibit viral replication by alteration of the proteolytic processing of replicase polyproteins and RNA-dependent RNA polymerase (RdRp) in rhinoviruses, HCV, and influenza virus, and diminish the RNA-synthesizing activity of nidoviruses, for which SARS-CoV-2 belongs. Therefore, it may be hypothesized that Zn supplementation may be of potential benefit for prophylaxis and treatment of COVID-19”.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7247509/>

**Quercetin: 500 - 800 mg twice a day, (can come with or without Bromelain)** - I take this regularly already for allergies, it is one of Nature's strongest anti-inflammatory compounds, if I was not taking it already then I would start it at the first sign of any symptoms of COVID - 19 for 10 - 14 days - (follow the instructions on the bottle for dosing). It acts as an anti-inflammatory and a Zinc Ionophore and is on the MATH+ protocol.

**N-Acetyl-L-Cysteine (NAC): I take 500 mg twice a day (but follow the instructions on the bottle).** As an antioxidant, NAC helps [replenish glutathione levels](#) in your lungs and reduces inflammation in your bronchial tubes and lung tissue. <https://www.healthline.com/nutrition/how-to-increase-glutathione>  
People with chronic obstructive pulmonary disease (COPD) experience long-term oxidative damage and inflammation of lung tissue, which causes airways to constrict — leading to shortness of breath and coughing. NAC supplements have been used to improve COPD symptoms, exacerbations and lung decline. In two studies, supplementing with NAC resulted in a significant increase in immune function — with an almost complete restoration of natural killer cells. These studies all involve different respiratory viruses but could be indicative of how NAC could be helpful in COVID – 19 as well:  
<https://pubmed.ncbi.nlm.nih.gov/27117852/>  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2706612/>  
<https://www.tandfonline.com/doi/abs/10.3109/15412555.2013.858315>  
<https://pubmed.ncbi.nlm.nih.gov/11115795/>  
<https://pubmed.ncbi.nlm.nih.gov/1378279/>



<https://pubmed.ncbi.nlm.nih.gov/1418777/>

A test-tube study indicated that in other immune-compromised situations, such as the flu, NAC may hamper the virus's ability to replicate. This could potentially reduce the symptoms and lifespan of the illness <https://pubmed.ncbi.nlm.nih.gov/19732754/>

**Melatonin:** (slow release preferred) Begin with 3mg at night, increase as tolerated to 6-12 mg at night. Melatonin is a safe over the counter medication. It has anti-inflammatory, antioxidant, and anti-viral (other than COVID-19 – studies are pending) effects. MATH+ protocol suggests melatonin to be given at almost all the stages of the disease. Here we discuss the synthesis and the mechanism of action of melatonin: <https://www.youtube.com/watch?v=JefAqwFmheU> (I personally eat Pistachios every night which contains Melatonin).

### **Gut PH:**

We have known for some time that COVID does NOT like an alkaline environment, and we have known for some time that the virus invades the GI system as well as the Respiratory system. Even if you have COVID but are not getting any GI symptoms, the virus is still partially entering the body through the gut.

If I get early symptoms of COVID I will take, early in the course, some alkalizing substance to attempt to diminish the viral replication in the gut - either **Pepcid** 20mg BID, (OTC) (preferred if anyone has Hypertension or Sodium Restriction, or any interactions with medications!) or small amounts of Baking Soda, (cheaper and more plentiful, but high in sodium - avoid this with Hypertension, Heart disease or Renal disease).

Baking soda has been demonstrated to work with other viruses as well, reducing the duration of cold and flu symptoms, frequently eliminating symptoms in 36 hours.

1 dose of Baking Soda = a glass of water (can be warm water) with a half-teaspoon of baking soda dissolved in it (it is vital to get a brand that does not have aluminum in it).

### **COVID dosing:**

Day 1 - Take six doses (a total of 3 teaspoons) of baking soda in glass of water at approximately two-hour intervals.

Days 2, 3, 4, and possibly 5 (depending on the severity and duration of your GI and Respiratory symptoms) - Take four doses (a total of 2 teaspoons) of baking soda in a glass of water at approximately 4-hour intervals. As you feel better and your symptoms continue to wane then bump down to taking two doses (a total of 1 teaspoon) of baking soda in a glass of water in the morning and in the evening, and after that only one dose (a half of teaspoon) in a glass of water each morning until symptoms are completely gone.

**I take Baking Soda in between meals, at least 1 hour before or after, and take it at least 1 hour before or after any of my medications or nutritional supplements - it may impact on their absorption.** More information can be found here, the dosage regimen above was modified from the typical cold and flu dosage regimen: <https://www.md-health.com/Drinking-Baking-Soda.html>.

At Home Pulse Oximeter, you can buy it at Walgreen's or CVS, if sick with COVID and it drops below 92%-94%, go to the hospital immediately. (It bumps up and down all the time, so make sure you are sitting still when you check it for real).

## **YEA - COVID is a treatable disease!**

You might have heard in the last couple of weeks the news that Dexamethasone, a type of corticosteroid, decreased mortality from COVID. To describe what a game changer this is, here is an article and a video about the history and research of the use of steroids in COVID patients that require oxygen, so basically hospitalized patients:

<https://www.nature.com/articles/d41586-020-01824-5>

[https://www.youtube.com/watch?v=phN0enMN\\_RE](https://www.youtube.com/watch?v=phN0enMN_RE)

It has become obvious to me that the US Big Pharma backed Medical Institutions, and their lackeys, such as the NIH, CDC, FDA and Fauci are suppressing treatments - insisting on double blind, randomized trials, and ignoring the millions of patients that have added a huge amount of clinical experience around the world that is being published by physicians and clinics – we are in the middle of a pandemic for God's sake!

In the following **MATH+ treatment protocols**, developed by a group of Critical Care Docs from 6 large institutions across the US <https://covid19criticalcare.com/team/>, who decided to jettison the NIH, CDC, FDA and the WHO and go through all the worldwide research themselves and develop treatment protocols for every stage of COVID, these Critical Care heavyweights, well known in their field, and well published, recommended treating with Steroids in late April or early May, they are ahead of the medical institutions by 2 months! Their gravitas should encourage your doctor to treat you, if God Forbid it ever becomes necessary, to the height of our medical knowledge.

These well respected Critical Care docs published their MATH+ medical protocols back in early May for the rest of the medical community to use, and then they testified to the US Congress:

[vimeo.com/416956383](https://vimeo.com/416956383)

They have been able to save significant numbers of lives with their protocols, in one of their studies of hospitalized patients with severe COVID, they only had 2 out of 100 patients in the ICU pass away, the rest improved and got discharged – that is incredibly successful!

There is a 23 page print out and a 2 page summary of their protocols at the this link:

[https://www.evms.edu/media/evms\\_public/departments/internal\\_medicine/EVMS\\_Critical\\_Care\\_COVID-19\\_Protocol.pdf](https://www.evms.edu/media/evms_public/departments/internal_medicine/EVMS_Critical_Care_COVID-19_Protocol.pdf) (EVMS CRITICAL CARE COVID-19 MANAGEMENT PROTOCOL .

Developed and updated by . Paul Marik, MD Chief of Pulmonary and Critical Care Medicine Eastern Virginia Medical School, Norfolk, VA - updated June 17th, 2020 – they are updated regularly).

You can print out these protocols and hand them to your physician, or to the physician of your loved one, to get them enrolled in treating you or your loved ones to the highest level possible.

They have protocols for prophylaxis of COVID patients, outpatients, and in hospital treatment.

If you want to know how this medical regimen is working against COVID, in detail, here are 3 videos that describe the exact physiologic pathways:

**1) MATH Plus protocol with Dr. Been (prophylaxis of COVID-19, and early at home treatment of symptomatic patients)**

<https://www.youtube.com/watch?v=Fudhhjow7mI>

**2) MATH Plus protocol with Dr. Been (in hospital treatment)**

<https://www.youtube.com/watch?v=qmGxrAyGJ6I>

**3) ICU Management with Dr. Been - MATH++ Protocol Part 3**

<https://www.youtube.com/watch?v=kS6rT8n65g8>

(There is only 1 supplement that I would add to their MATH+ protocols for prophylaxis and outpatient treatment of COVID: N-Acetyl Cysteine, such as our great teaching doctor, Dr. Seheult, takes for his own personal regimen: <https://www.youtube.com/watch?v=NM2A2xNLWR4&t=677s>)

### **Ivermectin:**

**Coronavirus Pandemic Update 96: RNA Vaccine; Ivermectin; von Willebrand Factor and COVID-19:** <https://www.youtube.com/watch?v=kk7KNBak-i0>

This video talks about the basic mechanism behind the biochemical pathway of severe COVID disease with micro-embolic phenomenon. Also the ABO blood group influence, and Tx with Steroids and Plasma Exchange for severe disease.

Also it also discusses Ivermectin and its many biochemical protections CD147 (Red Blood Cell protein) mediated vascular occlusion - CD 147 is a RBC protein which SARS-COV-2 binds to, and is responsible for the catch and clump mechanism seen in malaria, and in COVID-19. Ivermectin shields the SARS-COV-2 spike protein, preventing it from binding to CD 147 and also to ACE 2 receptors on other cells– blocking the virus from entering into the cells.

**Ivermectin 200 micrograms per kilogram diminished mortality by 40 – 50% in one hospital study in FL. Large clinical group in Dominican Republic announced they had a cure rate of 99% using one dose of Ivermectin.**

<https://www.trialsitenews.com/bangladesh-medical-colleges-dr-tarek-alams-ivermectin-working-98-with-between-400-500-patients-more-research-to-come/>

**#Ivermectin** Study Reveals Fantastic Results: 100% of 60 Patients Better in an Average of Just Under 6 Days: Recently, TrialSite News reported on a study sponsored in Bangladesh by Upazila Health & Family Planning Officer's (UHFPO) Office, and, First Affiliated Hospital Xi'an Jiaotong University. The observational study was conducted from May 2 to June 5, 2020. The principal investigators observed 181 patients who tested positive for **#COVID19**. The Research team recently shared the results via preprint server and ResearchGate. The study team concluded that concerning the treatment outcome, adverse effect, and safety, the Ivermectin and **#Doxycycline** combination was superior to the use of **#Hydroxychloroquine** and Azithromycin therapy in the case of mild to moderate degree of COVID-19 patients. Although both treatment regimens were observed to be effective for this study, the Ivermectin treatment was superior. <https://www.trialsitenews.com/ivermec...>

President of Dominican Republic's Largest Private Health Group Discusses the Success of Ivermectin as a Treatment for Early Stage COVID-19: The Rescue Group (Grupo Rescue) is a leading national private health network in the Caribbean nation of Dominican Republic. The Rescue Group operates three hospitals, including Punta Cana Medical Center, Bournigal Medical Center and Canela Clinic as well as affiliated referral hospitals, urgent care facilities, and an in-home service in addition to 17 emergency hotel medical centers. José Natalio Redondo, the group's president, is renowned in Latin America for the incredible success of his Ivermectin protocol used at the Rescue Group hospitals. Dr. Redondo took the time to speak with TrialSite News about the success of the Ivermectin treatment: they have treated 1,300 early stage COVID-19 patients and have observed dramatic results.

<https://www.trialsitenews.com/preside...> Dr. José Natalio Redondo Contact Email: [josenataliorendondo@gmail.com](mailto:josenataliorendondo@gmail.com)

National University Singapore Launches Large COVID-19 Prophylaxis Study Targeting Ivermectin & HCQ: The National University of Singapore serves the island nation as a tertiary hospital, clinical training center, and research center for medical and dental faculties. With 1,160 beds serving more than

670,000 outpatients and 49,000 inpatients, NUS is ranked first in Singapore & Asia Pacific and 11th in the world, according to the 2019 QA World University Rankings. This prestigious research organization initiated a large randomized Phase III open-label prophylaxis trial among migrant workers at high-risk of COVID-19; this study is known as the DORM Trial. Among the prophylaxis under investigation, hydroxychloroquine and Ivermectin are included. The study is led by Senior Consultant, Division of Neurology, Department of Medicine at NUS, Associate professor Seet Chee Seong Raymond. <https://www.trialsitenews.com/first-p...>

**Hydroxychloroquine – murdered by bad science, politics, and the media – doses used in many studies were above lethal levels, and never with Zinc! HCQ is a Zinc Ionophore.**

**Invermectin vs Hydroxychloroquine – which is more efficacious?**

<https://www.youtube.com/watch?v=VfTvViI8IKI>

**Coming Down The Pike – Specific Immune Cell Modulators to deal with the Cytokine Storm**

**Itolizumab:** CD6 and Pan T Cell suppressor. Reduces cytokines.

<https://en.wikipedia.org/wiki/Itolizumab>

**Lenzilumab:** that targets colony stimulating factor 2 (CSF2)/granulocyte-macrophage colony stimulating factor (GM-CSF). <https://en.wikipedia.org/wiki/Lenzilumab>

**PRO 140 (Leronlimab):** is a humanized monoclonal antibody targeted against the CCR5 receptor found on T lymphocytes of the human immune system. [https://en.wikipedia.org/wiki/PRO\\_140](https://en.wikipedia.org/wiki/PRO_140)

These immune modulators may also be helpful with the **Longhaulers** – when COVID dis-regulated immunity persists with increased Rantes / CCL5, Interleukin 6 and 8, TNF alpha – and persistent macrophages, Tcells, N Killer cells – anti CCL5 meds might be helpful to manage this prolonged cytokine rain shower. It is also helpful with these patients to consider a course of Steroids, and possibly Hydroxychloroquine / Zinc if still trying to clear the virus.

**[Assessment of Evidence for COVID-19-Related Treatments ...](https://www.ashp.org/-/media/assets/pharmacy-practice/resource-centers/Coronavirus/docs/ASHP-COVID-19-Evidence-Table.ashx)**

<https://www.ashp.org/-/media/assets/pharmacy-practice/resource-centers/Coronavirus/docs/ASHP-COVID-19-Evidence-Table.ashx>

"ASHP represents pharmacists who serve as patient care providers in acute and ambulatory settings. The organization's nearly 55,000 members include pharmacists, student pharmacists, and pharmacy technicians." This is a very conservative, pro Big Pharma, American medical industry leaning website – but they do keep you up on some of the studies that the NIH, FDA and CDC consider appropriate with a synopsis of each drug.