A Covid Preparedness Manual

3 April, 2021 draft

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Please Note: This is a draft with future revisions to follow.

DISCLAIMER:

This document is prepared for informational purposes only. It is not intended as a substitute for or way of delaying competent medical care under the supervision of a qualified healer.

But whether or not you have access to proper medical care, the more you know the better things will go if you or a loved one gets in a challenging situation.

Every effort has been made toward having this information be complete, up-to-date, and accurate. However, I cannot guarantee such.

Finally, please understand that much of this document contains my medical opinion. That opinion is based on my training, my research and my over forty years of experience treating patients in clinics. These opinions are shared by many other physicans. There is a spectrum of opinion on this hotly-debated subject. You have both the freedom and the responsibility of deciding where you stand in that debate.

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Covid Preparedness Manual Index

Introduction:

The medical system has, in some ways, failed us. Covid is a new, fast-moving, fast-changing illness. Modern medicine is a slow-moving, gargantuan orthodoxy, encrusted with complex rules and procedures and severely corrupted by the profit motives of Big Pharma.

The purpose of this manual is to prepare you with specific recommendations regarding:

1. what resources to have at home, ready and in place
2. what to do in case of covid.

None of these recommendations (at the time of this writing) are endorsed by the CDC, the FDA or any of the major medical societies (such as the American Academy of Family Practice or the American Board of Internal Medicine). Yet many, many physicians feel these measures can indeed help prevent and treat covid.

The time to build the levees is before the flood. Prepare now. If you do fall seriously ill you will have neither the energy nor the lead time necessary to help yourself with the protocols in this manual. For this reason, these recommendations include a shopping list of what to have on hand.

Brief Political Rant - Feel Free to Skip:

Many of us healthcare providers are heartbroken by what we see as the systematic censoring and suppression of all treatments or cures for covid outside of a narrow, highly profitable window of vaccines and costly new drugs. From our point of view, people are suffering and dying unnecessarily because of this.

While I have followed the covid epidemic closely since the beginning, the matter came to a head for me when a certain video was taken down off YouTube. This was a video of a United States Senate fact-finding panel questioning a licensed, board-certified Medical Doctor about the use of a common, inexpensive medicine to treat covid.

The physician was very sincere. He said they were getting wonderful results. And he said what to me were the magic words – "I'm not asking you to adopt the treatment. I'm simply asking you to go review the evidence on the subject."

Now in my world, when a media giant takes down a video of a United States Senator and a board-certified doctor having a reasonable conversation about a therapy, we have a big, big problem. In the time of shut-down, when "in public" means on digital media platforms, our right to free speech has been taken away. If we don't leap to the defense of that freedom, then we don't deserve to have it. Going, going, gone.

The physician was Paul Marik, MD, FCP (SA), FRCP (C), FCCP, FCCM, Professor of Medicine, and Chief of Pulmonary and Critical Care Medicine at the Eastern Virginia Medical School. In the hierarchy of medical doctors, this gentleman is way up there. He heads a department at a medical school, and he's got so many credentials I don't even know what half of the abbreviations stand for. So I downloaded his position paper on the subject ("EVMS COVID-19 MANAGEMENT PROTOCOL - An overview of the MATH+ and I-MASK+ Protocols" at https://www.evms.edu/media/evmspublic/departments/internalmedicine/EVMSCriticalCareCOVID-19Protocol.pdf. Updates to the protocol can be found on the website of the Front Line COVID-19 Critical Care Alliance at https://covid19criticalcare.com/math-hospital-treatment/).

Once I had the document, I dove into the laborious process of reviewing many of the more than 380 scientific papers listed in the bibliography. And while there is no certainty in science or medicine, I am convinced that the weight of the evidence supports my medical opinion: the potential benefits of Dr. Marik's [Ivermectin] approach far outweigh the risks. Having arrived at that opinion, and in a time of censorship and suppression, I have an obligation to speak out.

Until recently I was utterly mystified by the frantic and blatent efforts to suppress any development of a readily available, inexpensive treatment for covid. Then, just a few days ago, some of the pieces fell into place. The California gold rush was, financially, a little blip when compared to the rush for a covid vaccine. Hundreds of billions, if not trillions, of dollars are at stake. But under the U.S. law of Emergency Use Authorization, all of those profits will vanish if one single treatment for covid by an already-existing medicine is approved.

It's a point of law. The "Emergency Use Authorization of Medical Products and Related Authorities" guidance statement issued by the federal government (https://www.fda.gov/media/97321/download) puts it as follows

(Under section B, "EUA MEDICAL PRODUCTS, Item 1. "Criteria for Issuance of EUA", sub-section d):

"No Alternatives For FDA to issue an EUA

"**There must be no adequate, approved, and available alternative to the candidate product** for diagnosing, preventing, or treating the disease or condition."

So if one single "adequate, approved, and available" treatment for covid is found, all the vaccine manufacturers instantly lose their Emergency Use Authorization. They can no longer rush a dangerous, untested, experimental vaccine to market. They would have to take the new vaccines through the standard evaluation and safety testing normally required by the FDA. This usually takes seven or eight years. The vaccine manufacturers would lose billions and billions in potential income.

As they say in the murder mysteries, "Follow the money."

If you think all this might even possibly be true, don't you have a responsibility to investigate and find out for yourself? If you find out it is true, don't you have a responsibility to stand up and speak out?

Here ends the political rant.

The Ivermectin Protocol

This manual advocates a simple form of the Ivermectin-based approach as presented by the Front Line Critical Care Covid-19 Alliance (https://covid19criticalcare.com/).

Early in the epidemic there was fierce debate about repurposing a medicine called Hydroxychloroquine (which I will to as "HCQ). "Re-purposing" is the idea that we could take a medicine we already know is safe and FDA-approved and use it for some other illness than the one for which it is approved. HCQ was a great possibility because it is inexpensive and out of patent.

HCQ's advocates were Harvey Risch, MD and Vladimir Zelenko, MD. They both insisted on one point which was lost in the subsequent frenzy of political smearing. That one point is that HCQ is useful for covid in one specific situation: a high-risk person early in the illness.

Ivermectin (pronounced I-ver-**mec**-tin) came later. Ivermectin advocates insist that the evidence shows Ivermectin to be useful for covid from start to finish. As as scientist and a physician I have reviewed much of that evidence and I agree. For covid Ivermectin is useful in preventing disease, in treating early, mild disease and in treating later, severe disease. Because there is such a large body of evidence supporting Ivermectin, that is my focus in this manual.

I still feel the Hydroxycholoquine-based protocols have merit. but time is of the essence in the current world situation. I would like to get this manual out quickly. So I will wait on describing the HCQ-based approach for the time being.

I you decide you want Ivermectin on hand, it may take a little time and effort to obtain it. Be ready. It's better to have it and not need it than to need it and not have it. For this, please see Appendix: Obtaining Ivermectin

The Stages of Covid

I see four basic stages of dealing with covid. Different actions are needed at each stage.

1. Staying Healthy. In this section we are focused on medicines and supplements we can take to prevent serious covid (especially zinc, Vitamin D, Vitamin C and Quercetin). But really the work of staying healthy is much broader than that. Staying healthy requires intentional cultivation in many areas of life, including:

Learning about staying Health
Cultivating a positive state of mind
Connecting with others ina healthy way
Deep breathing
Movement/exercise
Diet
Good sleep
...and much much more.

Be healthy and strong and you won't need this manual. That is a broader discussion. If you would like to go further into my point of view on these areas, have a look at my website (http://www.michaelarnoldmdlac.com/) Also, I give a weekly Zoom called "In the Palace of Health" where the focus is entirely on getting healthy. It's a fun and positive space (In the Palace of Health is by donation. You can sign up through my website.)

2. Got exposed: What to do if you know you have been exposed to someone who has covid. You think they may have given it to you (They call this "*Post-Exposure Prophylaxis*.").

3. Covid with Symptoms: How to recognize if you have actually come down with covid, and how to respond to that situation (They call this "Early Outpatient Covid")

4. Severe Covid: How to recognize if covid has become severe and is beginning to incite the cytokine storm which is so destructive. When to go to the ER or call 911.

Should I get tested for Covid?

My opinion is: don't bother. I consider the majority of tests unsound and unreliable. They usually only serve to create a delay while you wait for the results. Everyone who feels that covid can actually be treated agrees on one thing: early treatment is the key.

(That the tests, especially the PCR tests, are unreliable is one of the main reasons that there are no real, reliable statistics around this epidemic.)

1. Staying Healthy

Summary of Recommendations:

- Zinc 30–40 mg/day
- Vitamin D 1,000-3,000 IU/day
- Vitamin C 1,000 mg twice daily
- Quercetin 250 mg/day
- Ivermectin: ("*Prophylaxis for high risk individuals*")
    - (only for high-risk individuals:
    - 0.2 mg/kg per dose (see the appendix "Making friends with Ivermectin to figure out what that comes to. For the average adult that is 12 mg.)
    - one dose to start
    - 2nd dose in 48 hours,
    - then one dose every 2 weeks

Gee, what are all those funny abbreviations?
mg = milligrams. One milligram is 1/1,000 of a gram.
IU = International Units

Should I take Ivermectin Just in Case?

For healthy people under the age of 60, I do not recommend taking antibiotics such as Ivermectin or HCQ "just in case."

Please remember that if you are healthy and strong your risk of suffering from a covid infection is very, very low. Your body just shrugs off the illness. With age and the presence of other health conditions, the risk increases. How much does the risk increase? It's hard to tell, because most of the numbers bandied about in this covid epidemic are uncertain and unreliable for a variety of reasons.

However, if you are at high risk for becoming seriously ill, you might consider low-dose, prophylactic Ivermectin as described below.

Supplements that make it highly unlikely you will fall seriously ill from covid:

There are four core supplements that, in my opinion, make it very unlikely that you could fall seriously ill if you contract covid. They are:

Zinc 50 mg/day
Vitamin D 1,000 to 3,000/day
Vitamin C 1,000 mg twice daily
Quercitin 250 mg/day

If you do nothing more than take these four supplements every day, you drastically reduce your chances of falling ill.

The rationale for those interested:

Zinc: Covid is an mRNA virus. When the mRNA gets into our cells, it hijacks our protein-making machinery to build more covid particles. Covid does this by first tricking our cells into making an enzyme that makes more covid mRNA. (This enzyme is called "*RNA-dependent RNA polymerase*".)
Zinc blocks this enzyme.

Also, zinc is essential to the proper functioning of the immune system in general. It has been taken for the common cold for quite some time.

Zinc deficiency is very common.

Vitamin D: There is a strong association between low Vitamin D and covid severity.

In one study Vitamin D deficiency was found in 82.2% of COVID-19 cases and 47.2% of the population at large. (https://academic.oup.com/jcem/advance-article/doi/10.1210/clinem/dgaa733/5934827) This tells us that Vitamin D deficiency is very, very common (almost half of the population in this study). It also shows that your risk of getting a bad case of covid skyrockets when you are vitamin D deficient.

Vitamin D is essential to the healthy function of the immune system. There is extensive research that shows if you have good levels of Vitamin D you are less likely to get any respiratory infection, including flu and tuberculosis. But taking a bunch all of a sudden doesn't work very well. It's important to take Vitamin D regularly to get the protective effect.

It's possible to overdose on Vitamin D, so if you want to go above the doses recommended here, I would do some more research or talk to a knowledgeable expert first.

Quercetin: Quercetin is a natural pigment present in many fruits, vegetables and grains. Quercetin is generally beneficial for the immune system and inflammation. However, there is one specific thing Quercetin does which is important in short-circuiting covid's attack. Quercetin helps Zinc get inside our cells.

As you read above, Zinc is key in stopping covid because it jams up the machinery by which covid reproduces. But even if you take Zinc, it doesn't necessarily get into the cell. The cell membrane stops the zinc from getting in. Quercetin helps the Zinc get into the cell so it can be effective.

(This, by the way, is one of the ways that Hydroxychloroquine also helps against covid.)

Quercetin has many other beneficial functions. Like Zinc, Quercetin also enters our cells and interferes with the functioning of the covid virus. Two of the most serious manifestations of the cytokine storm which covid can bring are inflammation and clotting. Quercetin reduces inflammation and inhibits clotting.

Vitamin C: So much has been published about Vitamin C and its beneficial effects that I feel no further comment is needed. It is scary to note that YouTube and Facebook have taken down information on the beneficial effects of Vitamin C for covid.

“I have not seen any flu yet that was not cured or markedly ameliorated by massive doses of vitamin C.” – Robert F. Cathcart, MD

Melatonin 6 mg near bedtime:

In this context Melatonin is being used to keep down inflammation in the body, since the more inflammation at baseline the higher the risk that covid will give one problems.

I am not enthusiastic about this recommendation and here is why: Melatonin is a messenger molecule that your brain secretes when it's dark. It tells the body it's time to wind down and sleep. Until recently Melatonin was known mainly as a sleep aid. As it turns out, Melatonin has many healing and anti-inflammatory actions in the body. It makes sense. When do we do a great deal of our healing and reducing inflammation? While we are at rest in the night.

My issue with taking Melatonin nightly has to do with the dynamics of messenger molecules. The cells that secrete messenger molecules like Melatonin get weaker if a pill is always substituting for the work of secreting that Melatonin. It's like muscles - if you don't work them, they atrophy. So while I don't have proof, I would theorize that taking Melatonin every night for months on end the cells in the brain that secrete Melatonin would have less and less ability to do so. Then, if one night you don't take Melatonin, it's hard to fall asleep because the brain has less or no ability to suddenly jump up and resume doing that.

I recommend instead good sleep hygeine and providing the circumstances by whic ha healthy amount of Melatonin would be secreted by the brain every night. That would involve things like keeping the electronics out of your room, having your room dark at night, no staring at screens within a couple of hours of bedtime, and so on.

Of course if you actually have an active covid infection, go ahead and take Melatonin 10 mg near bedtime every night for a couple of weeks or so. Then, when things are getting back to normal, let your brain cells resume doing that job. They need the work.

2. **Got exposed**:

("*Post COVID-19 Exposure Prophylaxis*")

- Continue the basic regimen of supplements from Section 1 (Zinc, Vitamin D, Vitamin C, Quercetin).
- If you have not already been taking "Ivermectin for high risk individuals", take:
    - Ivermectin 0.2 mg/kg per dose (see the appendix "Making friends with Ivermectin to figure out what that comes to. For the average adult that is 12 mg.)
    - 2nd dose in 48 hours
    - That's it.
- If you are already taking Ivermectin for high risk individuals, simply continue on as before.

3. **I Have Covid, But It's Not Too Bad ("*Early Outpatient Protocol*"** or **Symptomatic Patients at Home")**

Take Ivermectin:

- Ivermectin 0.2 mg/kg per dose (see Appendix: Making Friends with Ivermectin for help with that. The usual adult dose ends up being 12 mg)
- One dose daily
    - minimum of 2 days
    - Take until recovered, but no longer than five days.

Intensify and enhance the basic regimen to:

Vitamin D3: 4,000 IU/day
Vitamin C: 2,000 mg 2–3 times daily
Quercetin: 250 mg twice a day
Zinc: 100 mg/day in divided doses
Melatonin: 10 mg before bedtime (causes drowsiness)
Aspirin: 325 mg/day (unless contraindicated)

add

Melatonin: 10 mg near bedtime.

Check Vitals 2 or 3 times daily (especially blood oxygen saturation with Pulse Oximeter): (See "Appendix: Buying and Using the Pulse Oximeter" below).

Do things to prevent clotting:

See " Do things to prevent clotting" below.

How would you know if you have covid?
(i.e. When to start the "*Early Outpatient Protocol*.")

To navigate a covid scenario we need to rely, at least at first, on the information we can gather immediately while we are at home.

Prompt treatment is the key to success in treating covid, so promptly figuring out when you may well have covid is very important. It is also very important to know immediately when covid has gone from mild to severe because at that time the treatment changes.

Starting the "Early Outpatient Protocol" is not a big deal. You are not crossing the Rubicon or doing something irreversible like having your gallbladder removed. If you are high risk, it's better to start the regimen and turn out not to need it than to wait and later turn out to need it badly.

On the other hand, you wouldn't want to start treating for active covid infection every time you sneeze or feel tired.

Please understand that in medicine there is often uncertainty at the beginning of an illness, but it usually doesn't last. The illness usually declares itself quickly as time progresses. So if you are not sure, do a little bit of watchful waiting. See how all the values are trending. In most cases the way will soon be clear.

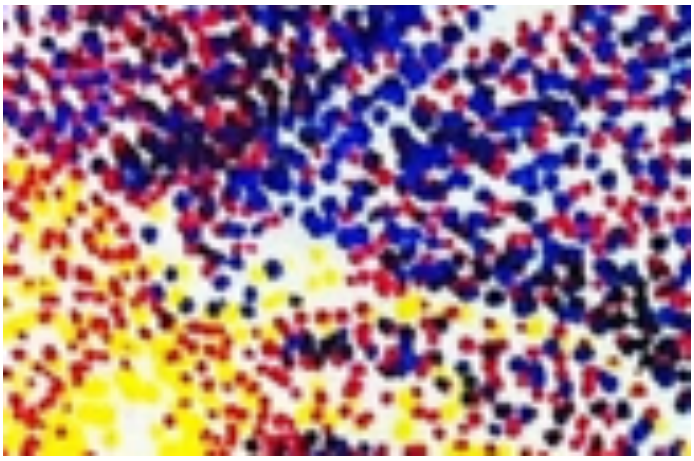
You might have the idea than medicine is an exact science. For the most part it is most definitely not. In clinic we more often make decisions based on probabilities than on certainties. For example, if a doctor sees someone in clinic for headache and there are no other red flags, they will probably diagnose a tension headache. That same headache could be a brain tumor or the beginning of an artery bleeding into the brain, but the chances are pretty low. It wouldn't be practical to get an MRI on everyone with a headache.

Time is of the essence in clinic, and one often does not want to wait for tests to come back before starting treatment. In the haze and confusion of the covid epidemic this is particularly true. So doctors often make a clinical diagnosis, which means we haven't proven it with tests yet, but this is what it looks like in clinic. Or they make a presumptive diagnosis, which means we don't have definite proof, but this is what it looks like at the moment, and we are going to act accordingly.

In the current epidemic, I would not rely on diagnostic tests at all. In my mind they simply cause delay and confusion. I have spent more than a few hours looking into the science of the PCR test and am convinced it is unreliable. (Yet almost all of the statistics describing this epidemic are based on it.) As to the other tests, I have heard enough negative reports to put me off. Perhaps in the future testing will become more reliable.

Gather all your data points

In medicine, diagnosing is like looking at a pointilist painting. You see a lot of dots. For a doctor those dots are the pieces of information that they have. Your temperature is one dot. Your pulse oximeter reading is another dot. Each symptom is another dot. Then you stand back and see what image is formed by all those dots.



Above are some of the dots from the painting below. They don't make much sense until you stand back and look at all the dots.

We are interested in signs and symptoms.

- Signs are what the healer finds on examination. This would include pulserate, lung sounds, blood pressure and so on.
- Symptoms are what the patient says they feel.

When it comes to numbers (such as heart rate, temperature, blood oxygen saturation) we are very often more interested in changes and trends than in absolute values. There is no single, normal temperature or heart rate for humans. (There are, though, ranges outside of which a healer would become concerned).

Since there are no absolute normals, I recommend you get a baseline of your vital signs while you are well. Then changes and trends will tell you very quickly when things are not going in the right direction.

What information would we gather to see if it's time to start the regimen?

1. How do I feel?

Many who suffer from covid (which, remember, is only a very small minority of people who get covid) report feeling a kind of toxic, poisonous feeling they have never felt before. Don't ignore that feeling just because we can't measure it with a gizmo.

2. The three most common symptoms of covid are:

- Cough (57%)
- Fatigue (71%) and
- Loss of taste and/or smell (80%)

3. Covid does sometimes have unusual symptoms:

- Loss of taste or smell
- "Covid toes" - itchy, painful rashes on the fingers and toes

3. Other symptoms of covid are common for any cold or flu:

- headache
- muscle aches
- chills
- sore throat
- red, dry or itchy eyes
- nausea
- loss of appetite
- vomiting
- diarrhea
- shortness of breath (but see "silent hypoxia" below)
- rash

2. How do I look?

Have someone look at you, and go look in the mirror. Trust what is seen. My grandfather always said, "The patient knows what's wrong with them."

Vladimir Zelenko, MD was one of the first proponents of HCQ for covid. He gave an interview in which he said he that after he had treated over 4,000 covid patients he could tell who had the illness just by looking at them.

3. What are my vital signs?

Vital signs are measurements you can take. They can help you tell when things are OK, when it's time to call in for professional advice, and when it's time to get to the emergency room or call 911.

Remember: vital signs are as much about trends as about specific numbers. You'll read, for example, that a normal temperature is 98.6°F. But that is really just the average temperature of the population. Many perfectly healthy people have temperatures slightly higher or lower than that. Be prepared – get some baseline values while you feel well. Keep a little notebook with your baseline values, and bring this notebook into play if you fall ill.

The key vital signs are:

1. Temperature
2. Pulse (how many times the heart beats per minute)
3. Blood Pressure (take this with a blood pressure cuff)
4. Respiratory rate (How many times you breath in a minute)
5. Blood oxygen saturation. In mild to moderate covid the blood oxygen saturation is still normal. In severe covid the blood oxygen saturation drops. (Take the blood oxygen saturation with a pulse oximeter. This shows what percentage of the blood in your arteries is carrying oxygen. See Appendix: Buying and Using the Pulse Oximeter for more details.)

Silent Hypoxia

The blood oxygen saturation is very important in telling when covid has begun to affect the lungs and the cytokine storm is beginning. If the pulse oximeter reading drops for an hour or more, it's time to call in professional help or go to the hospital.

The cut-off point they give, below which we become alarmed, is usually around 94%. But again, the trend is more important than the absolute number (especially if there is pre-existing lung disease). The importance of the trend goes double for pulse oximeters, as many of them are good enough, but not exact. It's also important to get use the thing correctly so you get good values (as described in Appendix: Buying and Using a Pulse Oximeter.) For example, if you use the pulse

ox on someone who has just climbed three flights of stairs, you might get a lower value than you would otherwise.

A word about the severe fatigue of covid: fatigue marks most viral colds and flu's. It is one of the body's ways of telling you to lie low because there's healing to be done. Healing takes a lot of energy. (One of the main reasons many illnesses don't heal in our culture is because people simply can't or won't stop and rest.)

But in covid there can be another reason for that severe fatigue – the lungs may not be getting enough oxygen into the blood. When this happens the person may be incredibly tired, but for some reason they often don't experience any shortness of breath. This is unique to covid. You only find out how low the oxygen level in the blood is when you check the pulse oximeter. This is why they call it "**silent hypoxia**. (Hypoxia just means low oxygen.)

Do things to prevent clotting:

When covid is symptomatic, the immediate concern is that the body will so over-react to the infection that it induces the cytokine storm. One of the main risks of the cytokine storm is excess clotting of the blood.

The cytokine storm is a form of extreme inflammation. With inflammation, the blood clots more easily. When the blood clots too much, blood flow is blocked and tissues don't receive the life-giving oxygen and nutrients they need. Therefore, when covid is symptomatic, it is important to start doing things that would prevent the blood from clotting too easily.

Easy ways to prevent blood clots:

1. Hydrate! You may feel terrible, and you might not be at all thirsty. You might as if you don't have the energy to get out of bed to fill your water bottle. Nonetheless, it is essential that you continually flush out your system by drinking enough fluids. Dehydration will reliably make your blood more likely to clot. Drink!

How will you know if you are taking enough fluids? By the urine. If the urine is dark yellow, you are concentrating your urine to preserve fluids. If the urine is light yellow or clear, you are getting enough fluids in.

(But note: some B Vitamins – i.e. Riboflavin – turn the urine a bright yellow. That doesn't count.)

2. Move! The pumping of the heart is only part of the way that blood moves around the body. The contractions of our skeletal muscles help squeeze the blood along. I know it might seem like climbing Mount Everest just to get out of bed and stand up, but do what you can to keep moving, even if it's only for a few minutes four or five times a day.

3. Breathe! When you take a deep breath the blood is drawn back towards the heart from the periphery. This aids blood circulation. Stand up and take ten deep breathes four times a day.

4. Do Bed Yoga: Even if you can't get up out of bed, you can do gentle stretching where you lie. Each stretch squeezes blood out of the muscles and back toward the heart.

5. Keep the Bowels Open: When toxins accumulate, inflammation intensifies and the likelihood of clotting increases. The bowels are one way by which we get rid of toxins. So do whatever it takes to keep the bowels open (fiber, magnesium, prunes, abdominal massage, senna, and so on).

6. Take Aspirin if it doesn't conflict with other medicines. Aspirin is the most common over-the-counter anti-coagulant. (An anti-coagulant is something that stops your blood from clotting so easily). The FLCCC recommends Aspirin 325 mg a day for early, out-patient covid.

7. Consider natural foods, herbs and supplements which keep the blood moving. But please remember that, be it a chemical, a supplement or an herb, the only difference between a medicine and a poison is the dose. If you use too many blood thinning herbs you can bleed too easily, and that is a whole different and dangerous problem. Please use judgement and common sense. Don't overdo it. If you overreact out of fear and take high doses, you are likely to make things worse.

Here are some herbs and supplements that thin the blood:

Turmeric: This herb is used in Chinese medicine to stimulate blood flow. It is commonly used in cooking and usually available fresh in health food stores. You could also consider capsules of the active ingredient of tumeric, which is curcumin (See, for example, the article at http://www.bmbreports.org/journal/view.html?volume=45&number=4&spage=221)

Ginger: Ginger basically contains the same active ingredient as Aspirin *(salicylate),* but in milder form.

Cayenne: This herb is quite rich in salicylates.

Cinnamon: Cinnamon contains Coumarin, a powerful blood-thinning agent. Coumadin, one of the most commonly used blood-thinning medications, is derived from Coumarin.

Nattokinase: Nattokinase is a natural enzyme derived from fermented soy beans. It is usually available where food supplements are sold. It decreases the blood's tendency to clot.

Should I take Antibiotics if I Have Symptomatic Covid?

There is debate about this. Mostly doctors now are saying no, don't take antibiotics unless there is some other specific reason. Earlier in the epidemic they thought that part of the problem was that bacteria would come and infect the lungs which were already weakened by the covid virus. But this is not turning out so often to be true.

Worsening and Severe Covid

A large percentage of covid infections are entirely without symptoms. Most covid infections with symptoms resolve on their own with a little rest and self-care. Only a small percentage go on to become serious.

Many people with mild covid symptoms go to the Emergency Room. The policy of Emergency Rooms at the time of this writing is to send you home unless you are quite ill. Therefore, it makes sense not to go to the Emergency Room for a mild covid infection. It would only stress you out, drain your energy, and potentially infect others.

On the other hand, seeking help promptly if things should start to go wrong is absolutely key. Time is of the essence when covid goes bad, and every hour counts.

It becomes crucial, then, to be able to recognize when to sound the alarm that covid is going in the wrong direction.

At that point you would immediately either:

- Call your health care provider (I would not wait more than an hour or two for them to call back. Instead I would procede to the next steps.)
- Go to the Emergency Room or
- Dial 911.

When covid becomes serious, the treatment changes. Additional medicines need to be brought into play. These medicines are:

- Something to stop the cytokine storm *(anti-inflammatory steroids)*
- Oxygen to breath (*supplemental oxygen*)
- Something to keep your blood from clotting too easily *(anticoagulants)*

If you can get prompt treatment at an Emergency Room, they will know to start these medicines immediately.

If, for whatever reason, you anticipate that there could be a delay in treatment, then you might want to have on hand and ready some version of the three medicines above.

In these times it's not hard to imagine that such a delay in treatment could occur. There have already been supply chain shortages for some medical supplies in this epidemic. There have already been instances where hospital Emergency Rooms were completely overwhelmed and there were long waits and delays in treating people. You might live in a remote area where it takes hours to get to the hospital. Or there could be road closures due to severe weather or due to civil unrest. There could be other collapses of infrastructure, such as a gas shortage.

The focus of this section of the manual is to give you the skills to know when it's time to go to the next level of treatment and call in the healthcare system.

However, if you do decide you want to be ready for any eventuality, I have included some appendices that give you a starting point:

Appendix: Anti-inflammatory Steroids for Covid
Appendix: Home Oxygen for Severe Covid
Appendix: Blood thinners (Anticoagulants) to Prevent Clotting in Severe Covid.

But please be clear: if you are going to have ready and know how to use these medicines for severe covid, especially the anti-inflammatory corticosteroids, you will have to have more medical knowledge than this manual provides. I can only offer a point of departure.

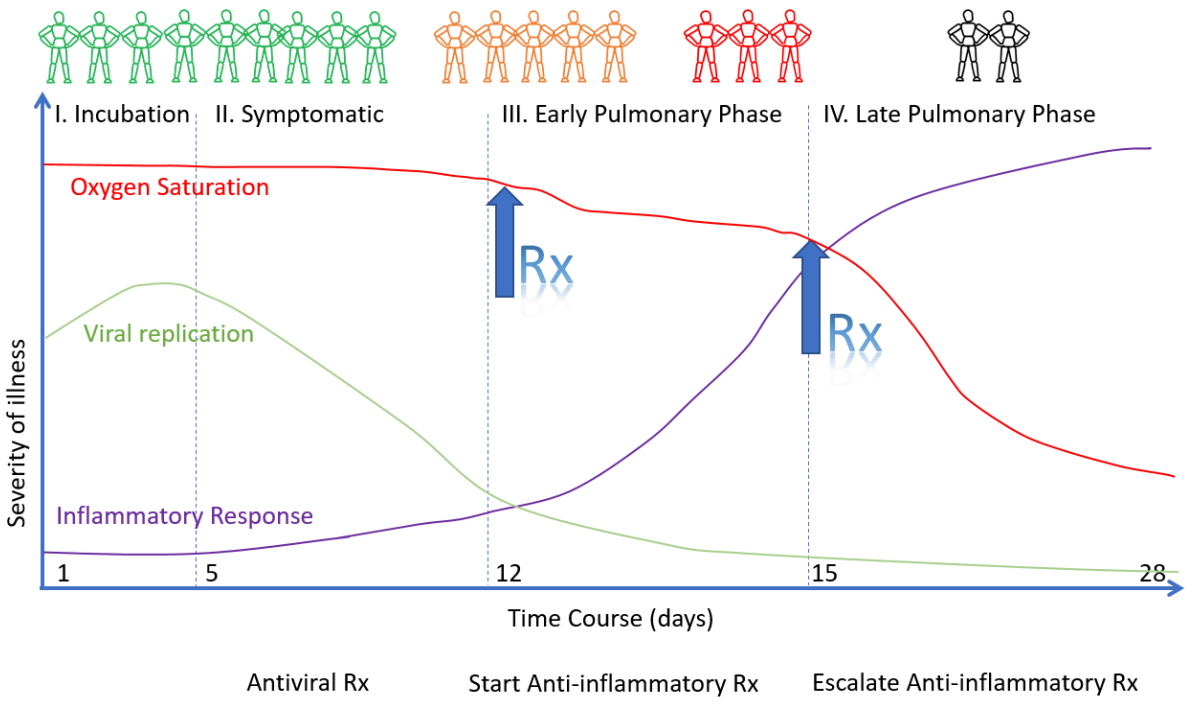
The Rationale for the FLCCC Regimen for Severe Covid

We currently think that, on average, in the first five or so days of a covid infection there are few or no symptoms. The virus is replicating and the body is gearing up to fight the infection.

Then, sometime around day five, flu-like symptoms begin. Over the next seven days, more or less, the body quickly controls the infection and kills the virus.

However, after that seven days the body's immune system can become extremely overactivated and start attacking everything in sight, especially in the lungs. This is the cytokine storm, which is potentially fatal.

It's important to understand that the cytokine storm is not an active infection. It is the body's overreaction to the covid infection which has just been conquered.



Timing is crucial in this matter.

1. If you start steroids too soon, while the virus is still active, you interfere with the immune system's response in stopping the virus.
2. If you start steroids too late, it is like letting a runaway train gather momentum. The cytokine storm is much easier nip when it's in the bud than when it's in full bloom. So once the viral infection is more or less over and the cytokine storm is beginning, it's important to start steroids right away.

How will I know if things are going the wrong way?

There are two key signs that covid is going from mild/moderate to severe:

1. A drop in the blood oxygen saturation as measured by pulse oximeter.
    1.1. The cut-off value for alarm usually given is **below 94%**, but this assumes normal values when you are well. It also assumes that you are near sea level. Have some baseline values so you know when the values are dropping.
2. An increase in the number of breaths per minute. A normal breathing rate is considered, on average, to be 12-16 breaths/minute for adults. But this is one value for which you really want a baseline. For adults, if the breaths/minute goes over 27, it's definitely time for action.
    2.1. Do remember, though, many things can make one breath faster, include fear and fever.

Most other signs and symptoms of severe covid are basically a worsening of any or all of the symptoms of mild covid.

Certain other serious signs demand immediate action:

- confusion
- sleepy and you can't rouse them
- so weak they can't move about

Clearly, then, it's advisable to have someone around to watch you (or at least check in regularly by phone) if you fall seriously ill from covid.

Should I start taking antibiotics if covid worsens?

Early in the epidemic many routinely gave antibiotics with the idea that since the lungs were impaired, the risk of bacteria coming to infect the lungs on top of the covid was high *(bacterial superinfection)*. Harvey Risch, MD and Vladimir Zelenko, MD both recommend antibiotics as part of the HCQ-based regimen, and the results are wonderful.

Current opinion elsewhere seems to be that we don't need antibiotics unless there is a specific reason.

If you do feel antibiotics are needed, some have been using:

Azithromycin 500 mg twice a day for five days.

while others use:

Doxycycline 200 mg followed by 100 mg daily for 5 days.

Gratitude

If this manual saves one life, I will consider all the work and struggles of my medical career well-rewarded.

We are all fully interconnected, and we are all fully interconnected with the entire web of life on Earth. There is no escape. No one is fully healed until we are all fully healed. For that to happen each one of us has to take responsibility, learn and actively cultivate their own health and the health of their family.

Please, if your spirit moves you, share this manual with your loved ones and with anyone you feel could receive its benefit.

With a wish that all be healthy and happy,

Michael Arnold, MD, L.Ac.
28 March, 2021
Aptos, California

Appendix: Anti-inflammatory Steroids for Severe Covid

Methylprednisolone: adult dose:

1. 80 mg to start,
2. Then 40 mg every 12 hours for a minimum of 7 days.
3. Evidence shows that if you stop before 7 days, the cytokine storm may come back.
4. When stopping anti-inflammatory steroids, it is better to taper off slowly than to stop suddenly.

OR

Prednisone:

1. 100 mg to start, then
2. 50 mg every 12 hours for at least 7 days.
3. Evidence shows that if you stop before 7 days, the cytokine storm may come back. When stopping anti-inflammatory steroids, it is better to taper off slowly than to stop suddenly.

DO NOT TAKE BOTH METHYLPREDNISOLONE AND PREDNISONE. THAT WOULD BE AN OVERDOSE.

Methylprednisolone seems to be a little better than Prednisone for severe covid, but Prednisone is more commonly available.

How Anti-Inflammatory Steroids Work:

With covid, it's the cytokine storm that's the problem. The body controls the virus, but the immune system is thrown so out of whack in response that the our own immune reaction can actually go on to kill the body.

When the cytokine storm is threatening, we want a medicine that will turn down the intensity of the immune system. We have such medicines in a class called anti-inflammatory steroids. These are medicines against inflammation. Some examples are Prednisone, Dexamethasone and Methylprednisolone. People commonly take them for things like asthma, auto-immune diseases and poison oak.

Please don't confuse this type of steroid with other types of steroids. You hear about sex hormones, which are a type of steroid, and also about the anabolic steroids which athletes and weight lifters may abuse. Anti-inflammatory steroids are quite different. They just lower the intensity with which the immune system is acting.

Timing is key when using anti-inflammatory steroids. You don't want to tamp down the immune system while it's dealing with the virus, but you do want to tamp down the immune system immediately when it is done dealing with the virus if it is then spinning out of control.

The general model now is that with a covid infection there is first a period where the person is infected, but there are no symptoms yet. This lasts an average of five days.

Then the symmptoms that the body is fighting the virus appear – fever, fatigue and so on. This lasts on average about a week.

In a relatively healthy person, after that week of symptoms there is a slow recovery and return to normal. But if that person is in the small percentage of people for whom covid will become serious or life threatening, it is at that point that the cytokine storm kicks in. It is at exactly at that point in time that one should start anti-inflammatory steroids (as well as oxygen and anti-coagulants).

If you start anti-inflammatory steroids too soon, it can interfere with the body's ability to conquer the virus. If you start them too late, it is like waiting to call the Fire Department when your house is on fire. This is why following the breathing rate and the blood oxygen saturation is so key. When the cytokine storm starts it begins to interfere with lung function and that shows up when measuring those values.

Of course most people don't need to start anti-inflammatory steroids at all. Their bodies simply deal with the virus and slowly return to normal. And we know that it is those who are already ill with other diseases that are most vulnerable to the cytokine storm. So if you already have some other illness like diabetes, high blood pressure, metabolic syndrome and so on, and you anticipate there might be a delay in getting treatment, you might want to have some anti-inflammatory steroids on hand just in case.

Anti-inflammatory steroids are powerful medicines with potentially serious side effects. They are by prescription only, and for good reason. If you should, God forbid, get into a situation where you need to take anti-inflammatory steroids without medical supervision, you would definitely need to have some basic knowledge about them.

That being said, to take anti-inflammatory steroids for a week in the face of an impending cytokine storm is quite reasonable. Many of the more serious side effects of anti-inflammatory steroids only occur over the longer term – months to years.

Anti-Inflammatory Steroid Cautions and Contraindications

The cautions, contraindications and side effects of anti-inflammatory steroids are bewildering until their basic effects are understood. These steroids signal the body that there is an external, physical threat. The body prepares accordingly:

1. Less energy goes to the immune system. The immune system is concerned with internal defense and clean-up. In an emergency, the body feels that this can wait.
    1.1. For this reason, if there is already infection in the body (viruses, parasites, fungi) they may get worse. It's as if all the police rush to defend the borders, and the criminals within are free to steal and loot.
    1.2. For this reason, they also recommend caution if the person may have a silent infection such as tuberculosis or parasites. They even caution use in people who have spent time in the tropics, where it's easy to contract parasites.
    1.3. For this reason they also recommend that you do not take live, attenuated vaccines while on anti-inflammatory steroids (An attenuated vaccine is a vaccine where the germ or virus is alive but has been weakened.)
    1.4. And what's the point of taking any vaccine is your immune system is not going to respond? The function of anti-inflammatory steroids is to blunt the immune response.
2. The blood pressure goes up: We need a full head of steam to deal with a physical emergency.
3. The body holds in fluids: In an emergency you may end up bleeding and need those fluids. Also this helps raise the blood pressure.
4. The body holds onto sodium (salt) and dumps potassium. This is part of holding in fluids, but it can result in high sodium and low potassium in the blood, which make it hard for the body (especially the heart) to function.

5. The blood sugar goes up: If we are going to run about and struggle physically for survival, we are going to need that sugar in the blood. If one already has diabetes, though, the diabetes could worsen.
6. The blood flows away from the gut and to the animal brain, the muscles and the lungs. Basically the body says, "We can digest things later, after we survive this threat."
    6.1. This is part of the reason why side effects of anti-inflammatory steroid use include ulcers and intestinal inflammation (colitis). If one already has either of these conditions, marked caution is indicated.
7. Feeling crazy: It's easy to understand that the ordinary, everyday state of mind in which we live is really quite different from the state of mind in which one would physically fight for one's life. Under threat, the spirit can become very agitated, which from the point of view of Western medicine becomes the possibilities of "euphoria, insomnia, mood swings, personality changes, severe depression, and frank psychotic manifestations"
8. Increased pressure inside the eye (glaucoma).

Drug Interactions with Anti-Inflammatory Steroids

Drugs.com lists 498 possible drug interactions with methylprednisolone. They have a search function to see if your specific medication interacts. (https://www.drugs.com/drug-interactions/methylprednisolone.html)

While the specifics may be bewildering, they usually make sense once we understand the basic thrust of how anti-inflammatory steroids act. For example, if you are on high blood pressure medicine, the dosage may not be high enough if the anti-inflammatory steroids induce your body to retain water and drive the blood pressure up.

Also, just because there may be a drug-drug interaction, that does not necessarily mean one can't take the medicine. You might just need to adjust the dose, or watch that particular parameter. I would certainly take, for example, a jump in blood pressure for a week while taking methylprednisolone over dying from the cytokine storm. And, if the vital signs are being followed, one would know to increase the blood pressure medicine as the blood pressure went up.

There is one other factor: medications are cleared from the body mostly by the liver and kidneys. Certain medications influence how quickly or slowly that occurs, which can mean that the doses of other medications have to be adjusted.

Appendix: Home Oxygen for Severe Covid

When the cytokine storm attacks the lungs, the lungs have trouble getting the oxygen out of the air. Without the oxygen, the body can't recover and heal. Oxygen is the basic energy currency on which our bodies run.

If you do not have oxygen on hand, you will certainly not be able to get it in a timely manner. At that point you are forced into going to the Emergency Room whether or not you would otherwise do so. Therefore if you do feel you may have trouble accessing medical care, or if you are severely opposed to going to the hospital, it would be good to have home oxygen on hand.

The FDA recently specifically issued a warning against trying to use home oxygen for Covid, saying that it should only be used in the hospital. Nevertheless, should that ideal situation not be possible, and the oxygen saturation be dropping, I wouldn't hesitate to use home oxygen until I could get help.

That being said, concentrated oxygen is a powerful medicine. As with all medicines, the difference between healing and hurting is in the dose. It is definitely possible to overdose on oxygen. The lungs can become inflamed and scarred from oxygen, and the nervous system can become overstimulated, even to the point of seizures.

The normal level of oxygen in the air at sea level is about 21% (the rest is mostly Nitrogen). The risk of inhaling a richer percentage of oxygen increases with the concentration of oxygen (up to 100%) and the time exposed.

However, severe covid is hopefully a very temporary situation. Home oxygen for a limited period of time is very unlikely to damage your lungs or nervous system. Ideally you would have contact with a medical provider who could guide you in its use.

If you do have to use home oxygen and can't get medical guidance, my guideline would be to only take enough oxygen to bring your oxygen saturation up to 95%.

I recently made a pass at getting tanks of oxygen for a client to have at home just in case, and found it was not at all simple or easy. The system is set up to get you

home oxygen on discharge from the hospital. The system is definitely not set up to get you home oxygen so that you don't have to go to the hospital in the first place.

However, there is an alternative to tanks for home oxygen. This is in the form of Home Oxygen Concentrators. They are machines that plug into house current. They contrate the oxygen that is already in the air.

As with pulse oximeters, there are Home Oxygen Concentrators that are medically approved and ones that are not medically approved. My impression is that the ones that are not medically approved are hastily-made junk, poorly constructed and poorly supported. Are they better than no oxygen concentrator at all? I don't know. (This is in contrast to my recommendations on non-FDA approved pulse oximeters, which appear to be workable)

A medically approved oxygen concentrator would be much more reliable. They are, of course ,more expensive, and they require a doctor's prescription. You would need to find a doctor sympathetic to the needs of the current world situation. (And just forget about getting insurance to pay for it unless you already have a serious lung condition, documented by lung function tests).

Appendix: Blood Thinners (Anti-coagulants) to Prevent Clotting in Severe Covid

The cytokine storm is a form of extreme inflammation. With inflammation, the blood clots more easily. When the blood clots too much, blood flow is blocked and tissues don't receive the life-giving oxygen and nutrients they need. Therefore when covid starts morphing into the cytokine storm, taking something to thin the blood so it won't clot as easily is important.

In the hospital they would give something like intra-venous heparin, but that is not possible at home. (If the dose of heparin is not just right, then the blood may become too thin and the person can start bleeding.)

Aspirin is the most common anti-coagulant for home use, and the FLCCC recommends Aspirin 325 mg a day for early, out-patient covid.

However, when covid becomes severe and one adds anti-inflammatory steroids, there are cautions about also taking NSAIDs (Non-steroidal Anti-Inflammatory Drugs) like aspirin ibuprofen, naproxen and so on. Combining anti-inflammatory steroids with NSAIDs may increase the risk of stomach and intestinal ulcers and bleeding. So there is debate on whether or not one should take these two medicines together in the setting of covid.

If the cytokine storm is life-threatening, one is going to need pharmaceutical blood thinners under supervision in a hospital environment. This is one reason why severe covid should be handled in the hospital

But until one is has arrived at the hospital, I wouldn't hesitate to intensify the measures described under the **I Have Covid, but it's not too bad ("*Early outpatient protocol*")** that reduce the likelihood of clotting.

Again, though, please remember that the difference between a medicine and a poison is only in the dose. Use judgement and common sense, and don't overdo it.

Shopping List for Covid Preparedness

Get from the store

Equipment:
blood pressure cuff
thermometer
pulse oximeter

Medicines:
Zinc
Quercetin
Vitamin D
Ivermectin (See Appendix: Making friends with Ivermectin for sourcing)

Optional Stuff
Home oxygen concentrator (need physician prescription) (see Appendix: _____)

Appendix: Buying and Using a Pulse Oximeter

Say what now? A pulse oxy what-the-what?

We need to know when when you're not getting enough oxygen out of the air and into the blood. The pulse oximeter measures how much oxygen is getting into the blood. In covid, when the amount of oxygen getting into the blood drops, that is a sure sign the problem has gone to the lungs and the cytokine storm is underway. Immediate action is crucial.

"Pulse Oximeter" is just short for "Pulse Oxygen Meter." It's a meter that looks at the pulse to see how much oxygen is getting into your blood.

Why is a pulse oximeter so useful re: covid?

Over 99% of covid infections come with mild or no symptoms. Rarely, covid goes badly, affects the lungs, and incites a storm of inflammation called the cytokine storm.

In the rare cases when covid goes bad, there is often an unusual feature: the person doesn't feel short of breath, but when you check the amount of oxygen in the blood, it is quite low. They call this situation silent hypoxemia, which simply means "silent low oxygen in the blood."

In any illness, you always have to look at the whole picture. You can't just focus in on one sign or symptom. That being said, a low level of oxygen in the blood is a major red flag that covid has gone beyond an annoying viral infection and has become life-threatening. The pulse oximeter is key to knowing if and when this point has been reached.

If the level of oxygen in the blood does fall, success in treatment depends on starting treatment immediately (with oxygen and anti-inflammatory steroids such as methylprednisolone).

Buying a Pulse Oximeter

A pulse oximeter is kind of like a seatbelt or a smoke alarm. You hope you never need it. But if you do end up needing it, you surely want one that is good and reliable.

So which pulse oximeter should you buy?

The most reliable pulse oximeters are approved by the FDA for medical use. They are only available with a doctor's prescription, and they are quite expensive.

The other class of pulse oximeters are designated "not for medical use" (NMU). They are much less expensive, and they will do quite nicely for the purposes of the MATH+ protocol. This is because we really only need to know if the oxygen in the blood drops below a certain point *(Authors are putting that somewhere around 93% these days).* At a value of 90% or above, the inexpensive, NMU pulse oximeters are relatively reliable.

The consensus is, though, that it's the trend of the pulse oximeter values that matter. So take a bunch of readings while you are well. If you fall ill, take a few readings every day and note the values.

Here are some tips for buying a pulse oximeter that my research has suggested so far:

1. Get a stand-alone pulse oximeter that works on your fingers. The ones that work through smart phones are not as reliable.

3. Get a pulse oximeter that also tells you the strength of the pulse signal. This is a measure of how clearly the pulse ox sees the blood in your arteries.

Why? The blood in your arteries moves in squirts. The blood in your veins has more of an oozing motion. The blood in the arteries has lots of oxygen. The blood in the veins has much less oxygen. We are interested in seeing how much oxygen is in the arteries, not the veins. To tell apart the blood in the arteries from the blood in the veins the pulse ox needs to see clear squirts of blood in the arteries. Pulse signal tells you how clearly the pulse ox is seeing those squirts.

As far as specific brands, it's hard to tell. Without endorsing any specific product or website, I found this website credible:

https://nursefocus.net/7-BEST-PULSE-OXIMETERS-REVIEWS-BUYERS-GUIDE/

Here are a couple of links with more general comments about pulse oximeters:

Consumer Reports:
https://www.consumerreports.org/medical-symptoms/covid-19-pulse-oximeters-oxygen-levels-faq/

FDA:
https://www.fda.gov/consumers/consumer-updates/pulse-oximeters-and-oxygen-concentrators-what-know-about-home-oxygen-therapy

It's important to be aware that pulse oximeters were basically developed for white people. They are somewhat less accurate in darker skinned people. (for more details: Racial Bias in Pulse Oximetry Measurement https://www.nejm.org/doi/pdf/10.1056/NEJMc2029240?articleTools=true)

How to Use Your Pulse Oximeter:

These suggestions apply to the kind of pulse oximeter you clip on your finger.

1. Get some baseline values while you are healthy. The trend of the readings is far more accurate than the individual readings. This is especially true since no all pulse oximeters are entirely accurate.

2. Tips for getting good readings:

a. If you have some illness wherein your baseline oxygen is less than 90%, the over-the-counter pulse oximeters will be less accurate. You might want to obtain a FDA approved medical-use pulse oximeter via a doctor's prescription.

b. Pulse oximeters were developed for white people. They are somewhat less accurate in darker skinned people. (for more details: Racial Bias in Pulse Oximetry Measurement https://www.nejm.org/doi/pdf/10.1056/NEJMc2029240?articleTools=true)

c. Remove any nail polish.

d. use the index or middle finger for the reading

e. take the reading at rest and not just after exertion.

f. The gizmo needs to see a good pulse. If there is not a good pulse, then just know the reading may be less accurate. That is why it is good to have a device that also tells you the strenth of the pulse signal. Things that might interfere with a good pulse are blockage in the arteries of the arms from diseases like diabetes or heart disease, low blood pressure, medicines such as albuterol which make the arterties tighten down.

g. If you are very overweight, take the reading while sitting up straight. Lying down or hunching forward may limit how much the lungs can fill up with air. This could give a low reading which has nothing to do with covid in the lungs.

h. Make measurements indoors, at rest.

h2. Take the measurement after breathing quietly and not talking for a few minutes.

i. Only accept values associated with a strong pulse signal.

j. Watch the reading for about a minute. It may jump around. Take a value in the middle of what you see.

k. If the fingers are cold, warm them up before trying to take the measurement.

l. If ill, take readings two or three times daily and keep a lot of them. The trend is the key issue.

Be aware that at higher altitudes, the oxygen saturation may be lower just because there's less oxygen in the air.

Remember that covid is not the only reason someone's oxygen saturation could drop. But if you have covid and the oxygen saturation drops, covid is certainly the most likely reason.

Appendix: Making Friends with Ivermectin

Ivermectin is a relatively safe and inexpensive medicine. There is a growing body of literature showing that Ivermectin is useful in the treatment of covid. If you are going to take Ivermectin while not under the care of a medical doctor (and of course I, as a medical doctor, would never recommend this. I would probably lose my license if I did so), it is important you be familiar with its side effects and drug interactions.

After you take Ivermectin, it reaches the highest concentration in the blood after between 31 and 47 hours. The half life is 18 hours. This means that every 18 hours the concentration of Ivermectin in a person's blood drops by half.

A Little Background on Ivermectin

Ivermectin was discovered in 1975 in Japan. It is processed from a chemical that is isolated from one specific kind bacteria. Ivermectin was first used to treat parasites, including:

1. River blindness (Onchocerciasis) - this is the second most common cause of blindness from infection in the world. It occurs in tropical climates, when flies carrying the parasite bite humans.

2. Scabies - a disease in humans where the scabies mite burrows under the skin, causing intense itching.

3. Filariasis - a tropical disease where these worms block up the lymph vessel, causing huges swellings, especially in the legs.

4. Strongyloidiasis - a tropical disease caused by roundworms which burrow up through the soles of the feet into the body when people go barefoot in infested areas.

Dose:

The recommended dosing of Ivermectin will depend on the situation. Doses in various situations are described in the protocols.

Very often, doses are given by body weight. The usual dose of Ivermectin is

0.2 mg/kg

If you want to do the same calculation based on your body weight in pounds it would be approximately:

0.1 mg/lb (milligrams/pound)

(The exact number if 0.091 mg/lb)

This means 0.2 milligrams per kilogram of body weight. So if, God forbid, you found yourself in a situation where you needed to take Ivermectin without consulting a physician, it would be very useful to be able to do this little bit of math.

Cautions and Contraindications:

Most people can take Ivermectin no problem. But some medical conditions make it a little more dicey. They would include:

Liver disease: Ivermectin is processed in the liver and extreted through the bowels.

Side Effects:

If you get side effects, stop taking the medication. If they become severe, contact your physician or go to the emergency Room.

Of course, it's not so simple to sort out side effects from the illness and other factors. For example, Ivermectin can, rarely, cause dizziness. But maybe you were just too sick to drink enough fluids and you feel dizzy because you're dehydrated. It gets to be a judgement call.

General
exhaustion/fatigue (0.9%),

Digestive:
abdominal pain (0.9%)
loss of appetite, can't eat (0.9%),
constipation (0.9%),

diarrhea (1.8%),
nausea (1.8%),
vomiting (0.9%)

Nervous System:
dizziness (2.8%),
somnolence (0.9%),
vertigo (0.9%),
tremor (0.9%)

Skin:
itching (2.8%),
rash (0.9%),
hives (0.9%).

Drug Interactions:

While generally safe, Ivermectin does interact with a lot of things, especially medications. If you are going to take Ivermectin you should know what other medications you are on and whether or not they will interact.

Please note that Ivermectin does interact with **alcohol**. Alcohol changes the levels of Ivermectin in the blood.

Also please note that Ivermectin interacts with **Echinacea**.

Below is a list of medicines with which Ivermectin interacts. Please note that in modern medicine most medications have two names - a brand name and a generic name. This list gives the generic names. To use it you should know the generic names of any medications you are taking. (For example, the brand name of one pill is "Valium." The generic same for that same pill is "Diazepam.")

Ivermectin Drug Interactions

From Drugs.comSearch

- 70 moderate drug interactions
- 2 minor drug interactions

Medications known to interact with ivermectin

Note: Showing generic names only.

A
- abametapir topical
- amprenavir
- anisindione
- apalutamide
- aprepitant
- armodafinil
- atazanavir

B
- boceprevir
- bosentan
- brigatinib

C
- chloramphenicol
- clarithromycin
- cobicistat
- conivaptan

D
- darunavir
- dasatinib
- deferasirox
- delavirdine
- dicumarol
- dronedarone
- duvelisib

E

- efavirenz
- enzalutamide
- erythromycin
- ethanol
- etravirine

F
- fosamprenavir
- fosaprepitant

- fostamatinib

I
- idelalisib
- indinavir
- isavuconazonium
- itraconazole
- ivacaftor

K
- ketoconazole

L
- lapatinib
- larotrectinib
- lefamulin
- letermovir
- lorlatinib

M
- mibefradil
- mifepristone
- modafinil

N
- nefazodone
- nelfinavir
- nevirapine
- nilotinib

O
- oxcarbazepine

P
- pitolisant
- posaconazole

R
- ribociclib
- rifapentine
- ritonavir
- rucaparib
- rufinamide

S
- saquinavir
- selpercatinib
- sirolimus
- sodium iodide i-123

- sodium iodide-i-131
- somapacitan-beco
- somatrem
- somatropin
- stiripentol

T

- tacrolimus
- telaprevir
- telithromycin
- telotristat
- temsirolimus
- troleandomycin
- tucatinib

V

- voriconazole

W

- warfarin

A Note From a Friend:

I have a friend who is a physician back East who uses Ivermectin for himself and his patients regularly. I asked him about his experience, and he had this to say:

I am very casual on using IVM myself. I was not aware of the drug interaction with tacrolimus until you pointed it out, and I have bookmarked the drug interaction page. IVM has been OTC in much of the world SA, Central America, Africa. Anywhere that malaria and parasites are found. Since the 1940s. Tens of millions of doses have been distributed by Merck for river blindness parasites. I consider it an exceptionally safe drug for occasional use.

Escalating dose studies in humans show no adverse effects when 10x the standard dose (2 mg/Kg) is used. In farm animals, it is at about 50x the standard dose (10 mg/Kg) that they begin to get wobbly, have trouble walking and become uncoordinated. It is at 75x (15 mg/Kg) that they become comatose. There are several breeds of dogs that are MORE sensitive to Ivm than average (including collies) so in dogs caution is used. Keeping Ivm out of the brain depends on an intact blood brain barrier. So, it is ***possible*** that encephalitis/meningitis might reduce the safety margin of Ivm by damaging the BBB. Ivermectin is a GABA

synapse neurotoxin, whose safety in humans is due to the blood brain barrier preventing brain access.

No doctor, vet or pharmacist can EVER say that vet ivermectin is safe for human use because application for human use of the horse paste (for example) has never been applied for, tested by the FDA or approved. So, nobody can ever publicly say it is OK. However, confidentially, several vets and a group of farmers have let me know that they personally use vet drugs and give them to family members and recommend them to close neighbors. A friend who is a large animal vet and farmer in the NE gives his entire family vet ivm every 10 days through the winter to prevent COVID. For me personally, that is good enough. But for many it will not be. Such is the nature of the information warfare that we find going on around us. 'Tis sad and some will be lost because of this.

To Do:

About pond cleaning Ivermectin

1.1. Other adjacent arrangements
    1.1.1. Room air circulation
    1.1.2. Contagion prevention for others
    1.1.3. Sub-routine here for how to carry out regimen at home when both parties are ill.
    1.1.4. Contagion prevention for self-inoculation
    1.1.5. Telemedicine arrangements
    1.1.6. Monitoring

11. Harvard: Nitrous oxide OK to try. Off label. In vitro virucidal. [wow, at least one could go out laughing...]

12: Harvard: neutralizing antibodies (Regeneron) "Specific neutralizing antibodies are under investigation. For hospitalized patients, trials of monoclonal antibodies were recently stopped by data safety monitoring boards as efficacy was unlikely to be seen. For outpatients, reports from RCTs of monoclonal antibodies suggest some benefit."

Appendix: Obtaining Ivermectin

1. Ivermectin by Prescription

In the U.S., Ivermectin is given only by prescription. At this time it may not be so easy to find a doctor willing to prescribe Ivermectin for. If you have a doctor who is open-minded but not yet on board, it might be worthwhile to download and print out "Review of the Emerging Evidence Demonstrating the Efficacy of Ivermectin in the Prophylaxis and Treatment of COVID-19" from

https://covid19criticalcare.com/wp-content/uploads/2020/11/FLCCC-Ivermectin-in-the-prophylaxis-and-treatment-of-COVID-19.pdf

Hand it to your doctor. Ask them to review the evidence.

It may help your physician to note that on January 14th, 2021 the National Institutes of Health (NIH) changed its stance on using Ivermectin for covid. They are now "neither for nor against."
This is the same status they currently give to monoclonal antibodies (like Regeneron) and convalescent plasma – treatments about which few doctors have reservations.

Is is legal in your state for a physician to prescribe Ivermectin for covid?

At this time the laws and standards in various states are in flux. I have not found a good summary of the situation. If you should happen upon one, please let me know.

Unfortunately, your doctors might not know if they are allowed to prescribe Ivermectin. I have heard more than one doctor refuse to prescribe Ivermectin because, "It might get me in trouble with the Medical Board," although they have no knowledge of that one way or the other.

I asked several friends to inquire of the Medical Board in my state if it were legal for a doctor to prescribe Ivermectin to have on hand in case of covid infection. More than three weeks later, neither of the inquiries have been answered. I did find a web site that stated that in California the Medical Board considers it "Unprofessional Conduct" to prescribe Hydroxychloroquine for covid. Unprofessional Conduct is a charge for which a physician could lose their license.

Lists of doctors known to prescribe Ivermectin for Covid

While I can make no warrantee or guarantee about the doctors on the lists below, here are some places to start looking.

1. This list is on the FLCCC website and includes doctors the world over:

https://covid19criticalcare.com/network-support/the-flccc-alliance/

They also have a shorter list of US physicians here:

https://covid19criticalcare.com/i-mask-prophylaxis-treatment-protocol/take-action-and-share-the-infos-with-your-doctor/

2. The website below is hosted by a private group of concerned citizens. It has a list of physicians who currently prescribe Ivermectin and/or HCQ in the USA:

https://www.exstnc.com/

4. Other sources of Ivermectin

As the medical system is limiting peoples' access to Ivermectin, some have resorted to taking veterinary Ivermectin made for horses. This is much more easily available. While the CDC and the FDA strongly recommend against this, I could find no specific reason that would make the veterinary preparation for horses or dogs toxic or otherwise unsuitable for humans.

There was one case reported in the media where the husband died and the wife became seriously ill after taking an Ivermectin preparation that was meant for scubbing out fish tanks. Only one case. I imagine they either took too large a dose, out of fear, or there were other ingredients involved.

You might, God forbid, you find yourself in a situation where your choice was veterinary Ivermectin or no Ivermectin. You might find yourself in a situation where you felt it was very important to take Ivermectin. If you are going to do so, please read the label carefully for other ingredients.

As it turns out, taking horse Ivermectin simplifies the dosing issue. The dose for horses by weight is the same as the dose for humans. Horse Ivermectin comes with a syringe with gradations marked by weight. So just pretend you're a filly and don't overdo it.

You will find dire warnings on the veterinary Ivermectin that it is not for humans, but I know more than a few humans who have taken it without ill consequence. Examing the label and searching on the web, I could find nothing that would suggest a human would have problems taking vet ivermectin (beyond a vague warning from the FDA).