

Positive Coronavirus Test = Covid-19

Acute COVID-19 Management Strategies

—PART FOUR in the Coronavirus Strategy Series—

YOU HAVE COVID-19. NOW, WHAT DO YOU DO?

Please review my handout: *An Introduction to Supplements for Coronavirus Prevention and Treatment* before embarking upon these immune stimulating, anti-viral, and anti-inflammatory strategies.

These strategies are started as soon as you get a positive coronavirus PCR test, or your doctor strongly believes that you clinically have Covid-19, or you have any of the “classic” constellation of symptoms that might be a Covid-19 infection: fever, loss of smell/taste, cough, shortness of breath, acute sick headache, sore throat, diarrhea, acute new muscle aches, and extreme fatigue in the presence of acutely feeling ill.

The goals of **immune stimulating** supplements are to naturally enhance the function of your immune system so that your body can more rapidly fight off the infection.

The goals of **anti-inflammatory** supplements are to try to prevent or decrease the onset of “cytokine storm” that causes a generalized inflammatory reaction and triggers the lungs to stop functioning.

The clinical strategy is to directly kill some of the coronavirus and right away, stimulate your immune system naturally, and **decrease your viral load**. If your viral load is too high (too many virions) then your body can get overwhelmed. We need to give your body time to mount the type of aggressive immune response that eliminates the virus from your body.

The goal is to support and augment your natural ability to self-heal with these management strategies. They are not definitive Covid-19 treatments.

How long should you use these acute strategies for a Covid-19 infection? My best educated guess is to take them for seven days beyond the end of your acute symptoms. That means to take the supplements for about 14-21 days. Some people may need to take this protocol longer depending upon the severity of their disease.

#1 Zinc Lozenges: *Use Zinc Lozenges four times per day.*

USE FOR ACUTE INFECTION ONLY: Zinc is very beneficial in helping to fight many acute viral infections especially colds and influenza. Zinc stimulates the immune system and has direct antiviral effects topically in the throat. They are especially helpful during the first 3-4 days of an infection. After 3-4 days, stop Zinc Lozenges! Do not use oral tablets—only use lozenges. But it must not be continued for more than 4 days, there are too many side effects related to prolonged zinc use. *BMC Family Practice*. Feb 25, 2015; 16:24.

#2 GENERAL IMMUNE SYSTEM BUILDER—Mixed Mushrooms

ACUTE INFECTION DOSAGE: Medicinal mushrooms have powerful immune system stimulating effects. They form, in my opinion, the foundation for prevention or the acute care of any viral upper respiratory infection. Find one with a mixture of Reishi, Shitake, Maitake, Cordyceps, Turkey Tail, Tremelia, etc. Mushrooms stimulate the immune system in many beneficial ways in order to fight viral infections naturally, have anti-inflammatory effects, and help to increase the diversity of the gut microbiome. *PLoS ONE*. November 7, 2019. 14(11): e0224740.

<https://doi.org/10.1371/journal.pone.0224740> and *BMC Immunology*. February, 20,2009; 10: 12 and *The Journal of Nutrition*. 2014 Jul; 144(7): 1128S–1136S and *The Journal of the American College of Nutrition*. April 11, 2015. Volume 34. 4780487.

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PLEASE NOTE: *There is a theoretical concern that taking immune stimulating herbs MIGHT make an auto-immune disease worse. If you have this category of medical illness, then your treatment MUST BE INDIVIDUALIZED by a knowledgeable medical practitioner.*

My current preference is the Ten Mushroom Formula, it has the best broad spectrum of mushrooms and has the best per capsule price. There are many different brands that can be used, here are a few that I know and trust:

- **TEN MUSHROOM FORMULA™:** *Three caps 4 times per day.*
- **MYCO-IMMUNE™ TINCTURE:** *Three dropperfuls 4 times per day.*
- **HOST DEFENSE MUSHROOMS MYCOMMUNITY™:** *Three caps 4 times per day.*
- **OM IMMUNE DEFENSE™:** *Three caps 4 times per day.*

#3 COLOSTRUM: *450 mg of 40% Standardized IgG, take 3 caps 4-5 times a day.*

ACUTE INFECTION DOSAGE: Colostrum is the Swiss Army Knife of herbs to help fight infections. It is a great general immune system stimulator. It can also be continued for the acute treatment of the Covid-19 and since the GI system is also infected, colostrum helps to support that part of the body at the same time.

Frontiers in Nutrition. 2018, 21 June, 5:52

#4 NAC: *600 mg three times per day.*

ACUTE INFECTION DOSAGE: N-Acetyl Cysteine (NAC) has been shown to be a powerful deterrent against influenza and is probably helpful for Covid-19. It does not prevent viral infections but has been shown to significantly reduce the symptoms of flu once people contract the virus. It specifically stimulates the immune system and helps the lungs. It helps to improve the healthy consistency of the mucus in the lungs.

European Respiratory Journal. 1997 Jul; 10(7): 1535-41

#5 Vitamin C: *1000 mg two times per day. USE FOR PREVENTION & ACUTE INFECTION.*

ACUTE INFECTION DOSAGE: Vitamin C has known immune stimulating effects and is a natural and safe choice to help support the immune system during Covid-19. There are current trials being done in the US and China treating COVID-19 pneumonia with IV Vitamin C. I think it is safe and worth trying as an acute strategy, but don't overdo it, 2000 mg per day is enough. <https://clinicaltrials.gov/ct2/show/NCT04264533>

#6 Probiotics: *PB-8 or the equivalent, one capsule twice daily.*

ACUTE INFECTION DOSAGE: The GI tract is affected by all coronaviruses and many influenza viruses. There are coronavirus cell receptors in the lung AND the gut. Coronavirus has been isolated from the stool. It makes sense to take some probiotic to help the immune system in the gut. Balancing the gut microbiome can help the whole body to better fight off upper respiratory infections. *Journal of Digestive Diseases. 2020 February 25 [Epub ahead of print]and Cell Reports. 2019; 28(1): 245-256. E4.*

- **PB-8**

There are hundreds of different brand names of probiotics. I prefer PB-8. It has 8 different strains of good bacteria, it does not need refrigeration, and it is the least expensive of the high quality probiotics. Take with colostrum if possible.

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#7 CHAGA: 650 mg caps, three caps 4 times per day (or the equivalent in powder).

ACUTE INFECTION DOSAGE: This herb has both anti-viral, anti-inflammatory, and immune stimulating effects. This mushroom grows on birch trees and has powerful anti-viral activity against other strains of coronavirus in the laboratory. *Journal Medicinal Chemistry*. 2007 Aug 23;50(17): 4087-95.

#8 MELATONIN: 5-6 mg immediate release formula before bed.

ACUTE INFECTION DOSAGE: Melatonin has helpful immune modulatory effects. Melatonin has been shown in other similar situations to help prevent or decrease the overreaction of the immune system theoretically decreasing the cytokine storm. It is currently being studied actively in experimental trials to fight Covid-19. *Life Sciences*, 2020 <https://doi.org/10.1016/j.lfs.2020.117583>

#9 FAMOTADINE (PEPCID-AC): 20 mg twice a day.

ACUTE INFECTION DOSAGE: Famotidine is a prescription and over-the-counter medication that is an acid reducer used to treat gastritis, GERD, and ulcers. Independent of its acid reducing qualities, it has positive effects on the immune system. All drugs in this class (H2 blockers) have this quality (e.g. cimetidine), but famotidine has more recently been studied in the context of coronavirus. It has a low side effect profile. I consider this a relatively safe and interesting drug that helps the immune system to better fight off coronavirus. *Gut*. 2020 Sep;69(9):1592-1597 and *Acta Pharmaceutica Sinica B*. 2020 May;10(5):766-788

#10 Vitamin D3: STOP DURING ACUTE COVID-19 INFECTION

For most acute infections, taking Vit D3 is a good idea, but maybe not for Covid-19? If you have a documented deficiency in Vit D, then continue to take Vit D3 during this infection. *Nutrients*. 2020 Apr 2;12(4):E988. There is currently a large clinical trial that is exploring the need to continue Vit D3 in the presence of Vit D deficiencies at the same time as Covid-19. <https://clinicaltrials.gov/ct2/show/NCT04344041>. If your Vit D levels are NORMAL, then suggestive evidence supports stopping daily Vit D3 supplements because it MAY theoretically make worse the cytokine storm seen in some patients with severe Covid-19 disease. *PloS One*. 2015; June 24; 10(6): e0130395 and *Journal of Biological Regulators and Homeostatic Agents*. March 2020; 34(2). So, use it for prevention only and for now, stop it during the acute phase. Don't worry, stopping Vit D3 for a few weeks will not drive you into deficiency, that would take months.

ANTI-INFLAMMATORY SUPPLEMENTS

At this point, many patients become tired of taking so many supplements. So, should you add in these anti-inflammatory herbs? If you are only mildly ill, then maybe you don't need this category of supplements. But if your symptoms are moderate to severe, or you have many other risk factors for making Covid-19 risky, then adding in curcumin, resveratrol, and quercetin would be a good idea.

#1 CURCUMIN/TUMERIC: 2 caps 2-3 times per day.

Try to get the high absorbable formula such as BCM-95 or Meriva, one that contains piperine such as BioPerine.

ACUTE INFECTION DOSAGE: Curcumin has powerful anti-inflammatory effects throughout the body and help to prevent the possibility of cytokine storm. *Preprints* 2020, 2020030226 doi: 10.20944/preprints202003.0226.v1

#2 RESVERATROL: 500 mg caps one cap two times per day.

ACUTE INFECTION DOSAGE: Try to find a brand standardized to at least 250 mg of trans-resveratrol.

Resveratrol has known potent antiviral effects against other strains of coronavirus such, as MERS, in the laboratory and is a powerful anti-inflammatory agent specifically for the lungs.

BMC Infectious Diseases 2017; February 13; 17(1): 144

#3 QUERCETIN: 1000 mg: 4x/per day.

ACUTE INFECTION DOSAGE: Quercetin has been shown in other similar situations to help prevent or decrease the overreaction of the immune system theoretically decreasing the cytokine storm. It is currently being studied actively in experimental trials to fight Covid-19. *Antimicrobial Agents Chemotherapy*. 2016 August 22; 60(9): 5182-8

and *Bioorganic and Medicinal Chemistry*. 2006 December 15; 14(24): 8295-306

OSTEOPATHIC MANIPULATION FOR ACUTE INFECTIONS

For nearly 150 years, Osteopathic Manipulation has been used to treat infectious diseases. The first Osteopathic Treatment in 1874 was used to successfully treat a 4 year old boy with hemorrhagic gastroenteritis. Way before the era of antibiotics, in the late 1800s and early 1900s, Osteopaths have used Osteopathic Manipulation to treat many hundreds of thousands of patients with upper and lower respiratory infections. In over 30 years of medical practice, I have treated thousands of patients with Osteopathic Manipulation to treat influenza, colds, sinusitis, pharyngitis, bronchitis, and pneumonia. Osteopathic Manipulation helps to naturally stimulate the immune system and helps to treat the body restrictions in the musculoskeletal system that adversely affect or are secondarily harmed by the infection process.

I do not have any scientific studies to reference regarding the positive effects of Osteopathic Manipulation in treatment of infectious diseases, especially upper and lower respiratory infections. I can only give you empiric medical evidence from my expertise and the clinical experience of hundreds of thousands of Osteopaths from around the world for over 100 years, that Osteopathic Manipulation helps the body to help itself more efficiently. If you can, see your Osteopath as soon as you get sick and get treated with Osteopathic Manipulation you will potentially get better faster and with less severity of infection.

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IF YOU HAVE A MODERATE or MODERATE/SEVERE COVID-19 INFECTION

If you have Covid-19, are seeing your doctor for this infection, and are being managed at home as an outpatient, then here are some additional suggestions. Please note, that if your condition gets worse, call your primary care doctor or go directly to the emergency room of your local hospital. If your condition is critical and are at home, you may need to call 911 for transportation to the ER.

- **CALCIUM:** 500 mg of Calcium Citrate once daily with food.

Very preliminary studies are showing that patients with moderate to severe Covid-19 develop low blood levels of calcium (hypocalcemia). This is likely an effect of some pathologic process. If you are still being managed at home, and you have a moderate to severe case of Covid-19, it makes sense to take a small daily dose of calcium as a supplement to potentially counteract the possible development of hypocalcemia.

Gastroenterology. 2020 Sep;159(3):1015-1018.e4.

- **POTASSIUM:** 99 mg tabs of Potassium Citrate, one tab twice daily with food.

Potassium will not prevent coronavirus, but once you have a significant Covid-19 infection low potassium levels (hypokalemia) are common especially in hospitalized patients. If you are still being managed at home, and you have a moderate case of Covid-19, it makes sense to take a small daily dose of potassium as a supplement to potentially counteract the possible development of hypokalemia. If you have high blood pressure and are taking anti-hypertensive drugs or you have poor kidney function, then discuss with your doctor before using this low dose of potassium. *medRxiv preprint* <https://doi.org/10.1101/2020.06.14.20131169>.

MEASURING OXYGEN LEVELS WITH A HOME PULSE OX UNIT

Moderate to severe Covid-19 causes dramatic damage to the lungs. When this happens, the oxygen levels in the blood can drop very low. Home oxygen devices called, PULSE OXIMETERS (pulse ox), are inexpensive ways to monitor blood oxygen levels. Normal readings are 97-99 %. If your O2 % drops to 94% or lower, then you need to contact your doctor immediately. **I suggest that every patient with moderate Covid-19 or worse purchase a home pulse ox unit.** If you are older than 65 years old or have an underlying chronic illness, you may want to purchase a pulse ox unit **before** any respiratory illness. Pulse ox units cost between \$10 and \$150. Do not purchase the units that are <\$10. I am recommending the *Contec CMS50DL* pulse oximeter. It costs \$19.95, can be ordered online, and has excellent overall effectiveness for the price.

SFP 11-7-20