

# Understanding Viral Infections

*"Viruses replicate in a very specific way; and if we understand the process, we can prevent and dramatically speed recovery."*

The series of programs that we have assembled on "viruses" is probably the most important group of Tuesday Minutes that we have ever assembled. I know that sounds dramatic; but think about it, our genetics can be short circuited by viruses, heavy metals and toxins. And I know it may sound like gloom and doom but if there ever was a viral bioterrorism event, it would be important to know what to do to protect your family and patients. Viruses replicate in a very specific way; and if we understand the process, we can prevent and dramatically speed recovery.

In preparing for this segment, I was reviewing Dr. Vasquez's most



recent work on "viruses". To me, his material is profound. And since he has been the one who attended 3 medical schools and has been studying and updating his antiviral model for 20 years, I thought it was appropriate to have him share it firsthand.

Yes, it is longer but definitely worth the investment. If it works with your schedule, click over and watch his video now. If not, I urge

you to come back and watch when you have time.

Here's one of the quotes that motivated me to watch this webinar by Dr. Vasquez. "Only by understanding viral infections can we prevent and treat them rationally and effectively. If we treat without understanding then we are fooling ourselves and throwing drugs or even nutrients at the mystery."

## *Virus Replication Ideas*

Given the right raw materials, the body can destroy viruses; however, if the virus replicates so fast that the immune system gets overwhelmed, sickness ensues. Dead viruses and the inflammatory cytokines that are secreted during the process of killing the virus are all part of the "fluish" process. Therefore any nutrient that can block or inhibit viral replication can be a therapeutic agent. There are a lot of things to consider in the list below.

If you have someone with a chronic virus or autoimmune condition, it may be worth the cost and hassle to take all these nutrients. However if someone has the basic flu, you can coach them from their nutrient cabinet at home to assist the healing process.

Most of the research on these nutrients was done using single nutrients, so a combination of them would create a synergistic effect and add to their effectiveness. Dr. Vasquez suggestions are always in addition to his [Five-Part Nutritional Wellness Protocol](#)

- 1) Paleo-Mediterranean Diet
- 2) **ProMulti-Plus** 2 tid
- 3) **Bio-D-Mulsion Forte** 1-2 drops
- 4) **Optimal EFAs** 2 tid
- 5) **BioDoph-7 Plus** 1-2 at bed or between meals.

Here are the nutrients highlighted from Vasquez webinar. You can see my ideas below.

**Bio-Ae-Mulsion Forte** - contains 12,500 IU per drop and contains approximately 700 drops per bottle. Dr. Vasquez recommends doses of 100,000-300,000 IU, (8-24 drops) for 3-10 days then a maintenance dose of 12,000-25,000 IU (1-2 drops) a day until the bottle is gone.

**Bio-D-Mulsion Forte** - contains 2,000 IU of vitamin D per drop. Use 10,000-50,000 IU (5-25 drops) for 3-10 days then cut back to maintenance dose of 4,000 (2 drops) per day.

**Se-Zyme Forte** - contains 100 mcg of selenium from a vegetable culture base. Use 600-800 mcg per day.

**Lipoic Acid** - 200-400 mg, two to four times a day. (Also supports Mitochondrial Health)

N-Acetyl-L-Cysteine - Biotics makes a 500 mg tablet called **NAC**. Use 1,000-1,500 mg (2-3 capsules) three times a day between meals. See [Tuesday Minute #198](#) for a more complete discussion on N-acetyl-L-cysteine. (Also supports Mitochondrial Health)

**Zn-Zyme Forte** - contains 25 mg of zinc per tablet, 25-50 mg either in a multiple or as a single nutrient.

**CoQ-Zyme 100 Plus** - Each capsule contains 100 mg of CoQ as well as the methylated B vitamins necessary for Krebs Cycle function. 1-3 capsules (Also supports Mitochondrial Health)

### **For chronic viral problems consider the following:**

**L-Glutamine** - comes in powder or capsules. 1 tsp of L-Glutamine from Biotics contains 3 grams of L-Glutamine. Consider 6 grams (2 tsp) 2-4 times a day between meals.

Vitamin C as **Mixed Ascorbate Powder**- contains approximately 3 grams per teaspoon, use to bowel tolerance. One of the more common sense yet controversial ideas about infections is the Vitamin C Flush. Numerous physicians have championed the idea using enough vitamin C to wash the bowel of waste and noxious substances, especially for the chronically ill patient who is constipated. Dr. Vasquez suggests 1-2 tbsp of Mixed Ascorbate Powder in juice and water. Drink a cup of coffee before and after the vitamin C drink to assure maximum motility. See [Tuesday Minute # 223](#) for a further discussion on the Vitamin C Calibration Test.

### **Other viral inhibitors of viral replication and immune modulators:**

Other valuable nutrients to consider are based on my personal experience and from feedback from other clinicians and speakers. Why so many variances? Biochemical

individuality! Everyone is different and has different nutrient deficiencies. These are the perfect nutrients to use with tender trigger points, pain or limited ranges of motion and then taste different nutrients to see which ones reduce the trigger points, pain or increase range of motion. Individual bio-feedback would tell which ones would give the greatest benefit. Make sure the patient can taste the nutrient before retesting the trigger point or range of motion.

1) **Nutrients that compliment or enhance T regulator cells.** Increasing T regulatory cells will reduce or cause TH17 to diminish. Reducing TH17 will naturally reduce autoimmunity.

Consider the following in any autoimmune compromised patient: vitamin A, vitamin D, green tea, omega-3 fatty acids, probiotics, and lipoic acid.

2) **Bio-Immunozyne Forte** - contains a wonderful foundation of nutrients to build cellular reserves particularly for the immune system.

3) **UltraVir-X** - 2 tid, developed by Dr. Gary Lasneski specifically to assist the immune system with viral problems.

4) **Cytozyme-THY** or **Cytozyme-SP**, 2 tid. If there is tenderness on the right side around the fifth intercostal space under the arm, use Cytozyme-THY. If there is tenderness under the left arm around the 7th intercostal space, use Cytozyme-SP, 2 tid. Also rub the tender points several times a day.

5) **Bio-FCTS** - The flavonoids in Bio-FCTS have viral replicating inhibitory effects. The quercetin has been shown to balance the relationship between TH1/TH2.

6) **IAG** - Larch arabinogalactans have been shown to increase natural killer cells.

7) **Detox-Virus #4** by 21st Century Homeopathics is used to help the body recover from virus on a homeopathic level

# Coronavirus: What To Do

*“ My thanks to Dr. Ray Bisevac who has taken the time to share a unique perspective in addition to the antiviral strategies we have been discussing from Dr. Vasquez.. ”*

**Here is Dr. Bisevac:** There is an untold story about the Coronavirus that you may want to know about, and you won't read about it on CNN, Fox News, Yahoo... or likely anywhere else. But here at Metabolic Management we don't want you to deal with fear; we want you to be at the forefront of scientific coverage and ahead of the game.

First, find the time to attend our Functional Medicine seminar coming to Bloomington, MN on March -19, Oak Brook, IL on March 21, and Madison WI on March 22, where we will present a more in-depth analysis of the current crisis and potential protection strategies.

Second, meet one of the mystery agents in this story: **ACE2** (human angiotensin-converting enzyme 2). Recent studies have found that SARS-CoV-2 and SARS-CoV share around 80% of homology and use the same cell entry receptor, ACE2. ACE2 has a remarkably high affinity for binding to the current coronavirus - even more so than in past epidemics. ACE2 was found to be much more actively expressed in goblet cells of current smokers and Alveolar Type II cells of former smokers. (Goblet cells are typically found in the respiratory, reproductive and gastrointestinal tracts). The other two receptors involved in Coronavirus (DC-SIGN and L-SIGN), present a similar story (1).

The fact that children don't smoke and have more robust immune systems seems to have spared them from the attacks.

Third, are you among shoppers tempted to raid Trader Joe's shelves to stock up on essential items? Similar paranoia with the Year 2000 crisis eventually turned out to be senseless. I would like to suggest that you stock up on sugars instead!



“Sugars!?” ... you may ask.

But I don't mean ordinary sugars. These are really special and **complex sugars**.

Let me explain...

For the Coronavirus to be effective, cleavage of the cell's **glycoprotein** coating is needed for entry into the cell.

This coating made of polysaccharides assists in cell to cell communication and **CELL TO CELL IMMUNITY**.

Four of the last eight Nobel Prizes in medicine have dealt with the cellular communication process. The **1999 Nobel Prize** for Medicine was awarded to Dr. Gunter Blobel for his work in this new field of Science - Medicine called Glycobiology.

I will further explain at our seminars why I consider one of these polysaccharides - **ARABINO GALACTANS** (Biotics IAG) - the shining star among them and why a particular concentration might be essential.

For now, it might suffice to say that stocking up on IAG might be more essential for your immune system than

hoarding food supplies. **I use 1 tsp a day for prevention and 1 Tbsp. tid therapeutically**

In addition to IAG, you may follow up on several basic nutrients Dr. Vasquez has suggested in his antiviral series to support the immune system and prevent viral replication. The lower dose can be used with people less than 180 pounds and a higher dose if over 180 pounds or under excessive stress.

- BioImmunozyne Forte 12 bid
- NAC 12 bid
- Bio DK Caps 1 bid
- Bio Ae Mulsion Forte 2 drops
- Selenomethionine 1 a day.
- Bio C Plus 2 three times a day or Mixed Ascorbate•Powder 1 tsp
- Children's ENT1 bid

1. Cai, G.; Cui, X.; Zhu, X.; Zhou, J. A Hint on the COVID-19 Risk: Population Disparities in Gene Expression of Three Receptors of SARS-CoV. Preprints 2020, 2020020408 (doi: 10.20944/preprints202002.0408.v1).

*It is critical to follow  
a clean diet  
to go with the nutrients.*

# Immune Boosting Strategy

For \_\_\_\_\_

Date \_\_\_\_\_

Take the following supplements until your re-evaluation on (date) \_\_\_\_\_

Purpose	Supplement	per day	with breakfast	with lunch	with dinner	before bed
<b>Immune Boosting</b>  <i>Nutrients listed in order of importance</i>	IAG	1tsp-1tbsp				
	Bio Immunozyne Forte	2-4	1-2		1-2	
	NAC	2-4	1-2		1-2	
	Bio DK Mulsion Forte	5 drops or 1 capsule				
	Selenomethionine	1	1			
	Mixed Ascorbate Powder	1	1			
	Acti-Mag Plus Powder	1	1			
	Children's ENT lozenge	2	1		1	

## IAG

This highly refined powder contains up to 99% pure arabinogalactans. Arabinogalactans function as immune modulators, enhancing or decreasing the immune function as needed. It is the arabino- galactan content of Echinacea which is responsible for its anti-microbial reputation, and it *only* contains about 6% of these arabinogalactans, IAG contains up to 99%! One researcher calculated that 1 tsp of IAG has the power of 3-5 bottles of commercially available liquid echinacea. This powder mixes well with juice; it is the perfect immune enhancing food for children with chronic or acute infections.

## Bio-Immunozyne Forte

A multiple that is high in vitamin A, zinc, phosphorylated B vitamins as well as other immune support nutrients: Bio-Immunozyne Forte is my choice. I am taking 1 twice a day normally and 2 twice a day when stressed out.

## NAC

NAC 1-2 capsules bid. Dr. Vasquez has several hours on his website discussing the benefits of NAC on viral protection. He lists about 10 different mechanisms that NAC offers. It has particular protection against lung and respiratory infections.

## Bio DK Mulsion Forte

Bio-DK Mulsion Forte 5 drops of the liquid or one

capsule. This gives me 5,000 IU of vitamin D and 300 mcg of K.

## Selenomethionine

Selenium has been studied individually and shown to inhibit viral replication, so to use it in conjunction with supportive nutrients will give it an added edge.

## Mixed Ascorbate Powder

Use 1 tsp and mix it in water or a little juice. Vitamin C reduces histamine which is an issue if people get the virus. We discussed the multiple benefits of vitamin C on another TM and reminded viewers that high dose vitamin C has been used successfully with polio and rabies back in the 40's and has multiple benefits. The beauty of the powder is that I can mix it with Aqua Mag Plus to get my 400 mg of magnesium.

## Act-Mag Plus Powder

Acti-Mag Plus powder contains the 400 mg of a form of magnesium that won't cause diarrhea and contains beet powder and some B vitamins.

## Children's ENT

Finally I always want to support the microbiome, specifically oral microbiome so take 2 Children's ENT a day.