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Coronavirus Patient Alert and Information

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Dear Patients,

As you know, we are over 2 years into the Coronavirus (COVID-19) outbreak pandemic. We modify our policies based on the current local case load and current variant attributes. As a result, our office has changed its policies from in person appointments to telemedicine. We have been doing this successfully for almost three years and will continue to do this until the pandemic is over, which doesn't look like it is going to happen anytime in the near future. Our telemedicine platform (doxy.me) is completely HIPAA compliant and secure. We do require that all patients provide Dr. Marra their vitals (blood pressure, pulse, temperature and weight) during their appointments over video or telephone. With this in place, we are prepared to continue servicing your needs, while ensuring that everyone remains safe from inadvertently contracting COVID-19 virus. Dr. Marra is a member of several physician groups who discuss this pandemic, and she attends several webinars to remain current with research and treatment options for the COVID-19 virus.

Heather and I are frequently disinfecting all surfaces in the office with ***Briotech***. It's an all natural solution of HOCL (hypochlorous acid) that is also a natural part of our immune system's defense, produced in white blood cells. It has excellent antimicrobial activity and quickly inactivates pathogens such as viruses, fungi and bacteria that dwell on surfaces. Please go to <https://www.brioglobal.com/pages/science> for more information on this natural disinfectant.

Coronavirus Pathophysiology:

ACE-2 – How the virus enters your cells:

The Coronavirus attaches to a cell surface protein called ACE-2 which is an enzyme. When the Coronavirus binds to ACE-2, it becomes inactive which produces “ACE-2 exhaustion.” This exhaustion may be responsible for pneumonia that is associated with COVID-19.

Supplements that enhance ACE-2 include:

- *Resveratrol*
- *Curcumin*
- *Alpha Lipoic Acid*

mTOR – Replication and Proliferation of Coronavirus:

Once the virus has entered a human cell, it begins replication by hijacking a ubiquitous protein called mTOR. The body then uses special proteins called Sirtuins to control mTOR activation. **Therefore, nutritional activation of Sirtuins can inhibit mTOR and inhibit viral replication.** Nutritional modulators of mTOR include Resveratrol, Quercitin, Curcumin, apples, and onions.

Following is a list of foods that are high in *Sirtuins* that you might want to increase in your diet at this time:

- | | |
|---------------------------------|------------------------|
| ● <i>arugula</i> | ● <i>kale</i> |
| ● <i>buckwheat</i> | ● <i>Medjool dates</i> |
| ● <i>capers</i> | ● <i>parsley</i> |
| ● <i>celery</i> | ● <i>red endives</i> |
| ● <i>chilies</i> | ● <i>red onion</i> |
| ● <i>cocoa</i> | ● <i>red wine</i> |
| ● <i>coffee</i> | ● <i>strawberries</i> |
| ● <i>extra virgin olive oil</i> | ● <i>turmeric</i> |
| ● <i>garlic</i> | ● <i>walnuts</i> |
| ● <i>green tea</i> | |

Proteases: Coronavirus mechanism of spread:

Once the virus particles have multiplied, Coronavirus causes human cellular damage by producing an enzyme called 3CL protease. Some dietary flavanoids like *Quercitin* can inhibit 3CL protease that helps minimize the infection. *Elderberry and Houtynnia* are both herbs that have been shown to inhibit the viral 3CL protease and viral activity in the cell.

Inflammasome: Activation of Proinflammatory Cytokines:

Inflammasomes are an elegant feature of our immune system because they “sense” pathogen danger. Activation of the inflammasome causes the release of a variety of proinflammatory cytokines, which stress the alveolar cells in the lung, and this results in respiratory distress. A weakened immune system therefore, is likely to precede severe illness. The Coronavirus may have intrinsic mechanisms to evade the human immune system, just as we see in bacterial stealth infections like Lyme disease.

Melatonin produced in the pineal gland and Vit C, both potent antioxidants, inhibit inflammasomes and scavenge free radicals produced by inflammation. Both of these supplements are highly recommended during this Coronavirus outbreak.

Nutrients to Prevent a Cytokine Storm:

- ***Turmeric (by EcoMedica)***
- ***White willow bark (Saloxicin)***
- ***Boswellia (Pure Encapsulations)***
- ***MSM (Orthomolecular Products)***
- ***Fish Oil (EFA Sirt or Arctic Ruby)***
- ***Resveratrol (Resveratrin by Zymogen)***
- ***Quercitin (D-Hist by Orthomolecular)***

The doses for these nutrients vary depending on age and weight, so please check with your healthcare provider for appropriate use.

General Wellness Behavior During the Coronavirus Outbreak:

- Wash hands with soap and water frequently throughout the day for at least 20 seconds. Especially as you transition into and out of places. Use Briotech to disinfect all high contact surface areas.
- Gargle twice daily with either warm lemon water or apple cider vinegar to keep the throat area clear of germs.
- Social distance yourself and your family by standing 6 feet away from others. During this allergy season, make sure to cover your nose and mouth when you sneeze and cough. Wear a mask and gloves when you go to the grocery store, the pharmacy, gas pumps and any other essential needs.
- Eat a balanced diet with lots of fruits and vegetables, especially garlic, which has antimicrobial properties.
- Drink plenty of water throughout the day to stay hydrated (1-2 liters/day depending on body weight).
- Get at least eight hours of restful sleep/night.
- Only go to places with many people and crowds, i.e. grocery store, when you absolutely have to. Use gloves when touching produce.
- Hug your family and pets during this trying time and remember, this too shall pass. Find the joy in your life and milk it for all its worth.
- Completely limit travel at this time (plane, train, bus).
- Humming for 5-10 minutes a day can clear your throat so that the Coronavirus can not stick and increases nasal nitric oxide.
- If you get symptoms of fever and dry cough, call your PCP immediately and get tested for Coronavirus. Self quarantine and avoid the hospital if you can. Begin treatment by using herbs and nutritionals until you have a positive test.

Example of Natural Combination Preventive Treatment:

- *Quercitin*
- *Green Tea*
- *Curcumin*
- *Melatonin*
- *B Glucan*
- *Elderberry*
- *Zinc*
- *Astragalus*
- *Andrographis*

DISPENSARY:

If you need supplements, our dispensary will remain open during the Coronavirus (COVID-19) outbreak. Please call us at (360) 445-3570 to place an order and we will mail your supplements directly to you.

LABS:

All patients are still required by law to do routine lab work if they are on medication, especially pharmaceuticals. Please use at least one N95 or KN95 mask and wear gloves when you go to the lab. Take your mask and gloves off as you exit the lab and throw them away or put them in a plastic bag.

If you would like to use a mobile phlebotomist to come to your home to draw blood, please call Elite Phlebotomy at (360) 784-0748 or email them at scheduling@elitephlebotomy.com. The charge is \$50.00 per visit draw.

VIRAL SUPPLEMENT SUPPORT:

During this stressful time, there are a number of nutritional and antiviral supplements that can help support your immune system. You may purchase them by calling my office. If you would like a viral treatment plan designed for you, please call my office and make an appointment.

- **Vitamin C** – buffered vitamin C has long been used to support immune function during the winter months. It has antiviral properties and is a very strong antioxidant. Dosing varies by age and weight. Please contact your healthcare provider for instructions on how to dose Vit C.
- **Vitamin D** – 1,000-10,000 IU/day is an immunomodulator. For some patients you will also need to take Vit K and the supplement is K Force by Orthomolecular Products. • **Vitamin A** – (not for use in pregnant women) is a potent antiviral at 100,000 units/day for 7 days. Please consult your healthcare provider for proper dosing instructions.
- ***Argentyn 23 Bio-Active Silver Hydrosol Vertical Spray*** – *has shown effectiveness against H5N1, and we use it frequently for the viral component (EBV, CMV, HHV6) of tick borne disease. The colloidal silver dose is 1-20 drops in water twice daily but please consult your healthcare provider.*
- ***Beyond Balance IMNV III*** – *this is a blend of antiviral herbs that shows great promise against viruses. Dosing is 1-20 drops twice daily but please consult your healthcare*

provider.

- **Researched Nutritionals Multiimmune** is a blend of antiviral nutritional and herbs. The dosing is 2-4 caps twice daily but please check with your healthcare provider.
- **Monolaurin (lauricidin)** is a nutrient derived from coconut that has many antiviral properties. Dosing can be 300mg twice daily but please check with your healthcare provider.
- **Skullcap tincture (Scutellaria)** has some antiviral properties but is most nutritive to lung tissue. This would be especially useful during the Coronavirus outbreak that targets the lungs. Dosing can be 1-20 drops in water twice daily but please check with your healthcare provider.
- **Elderberry (Sambuca)** has a long history of immune boosting properties and is very high in antioxidants. Dosing does depend on weight and we use gummies because they have a great taste.
- **Biocidin spray** is a great blend of antiviral herbs that can protect the throat, which is known to harbor and incubate the Coronavirus. Dosing varies depending on the patient so please consult your healthcare provider.
- **Houtynnia cordata** is an herb native to Southeast Asia that shows promise against the Coronavirus. Dosing depends on the individual so please check with your health care provider.
- **Quercitin** is a bioflavanoid and polyphenol found in many fruits, vegetables, seeds and grains. It also suppresses the replication of Coronavirus and minimizes the spread.
- **Melatonin** is an antioxidant that is produced in the pineal gland of the brain and inhibits inflammasome activity. Dosing is 1-40mg but please check with your healthcare provider for individual dose.
- **Resveratrol** is a bioflavanoid found in grapes and red wine that enhances ACE-2 activity and suppresses the replication of Coronavirus.
- **Andrographis** is an herb that decreases viral replication and enters the cell easily by passive diffusion. It also has anti-inflammatory properties.
- **Sulphoraphane** which is found in broccoli has excellent immune protection properties and we use Oncoplex by Zymogen. Please speak with your health care professional for dosing.
- **Zinc piccolinate** prevents viral replication and decreases complement over activation. However, it is difficult to get inside the cell so use zinc with Quercitin and/or Green Tea.
- **Licorice** in the form of glycyrrhizin inhibits the Coronavirus replication but it is also contraindicated in patients with hypertension. Please consult with your health care provider for dosing and appropriate use.
- **Glucan** is a nutrient that is very June supportive, especially in combination with Sulphoraphane and Maitake mushrooms. Please speak with your healthcare provider about use and dosing.
- Gargle with warm **lemon water or apple cider vinegar** twice daily to keep the throat clean from any Coronavirus invasion

Lastly, some of you may want to purchase an in-home ozonator to clean the air from any viruses, bacteria or fungi. You can search through ozonators online, but the one I recommend is: Airthereal

MA10K-PRO Ozone Generator 10000mg/h High Capacity O3 Ionizer Machine Fireproof Tested by SG (\$120.00.)

You can safely use this in your home provided you remove people, pets and plants from the house. Otherwise O3 can suffocate living O2 breathers. Turn it on when you leave for work so that there is plenty of time before you return to your own home. Otherwise, ozone can irritate mucous membranes and cause burning.

I hope all of you can remain calm and stay safe during this difficult time. This is a time to reflect on all the things in your life that you absolutely love and shower them with gratitude. I am grateful for the information I have obtained from other ILADS doctors to formulate this alert for you. It is the most comprehensive and current information on the Coronavirus (COVID-19) that I am able to obtain at this time.

Sincerely and with best wishes to stay healthy and stay safe,

Dr. Susan L. Marra

References:

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