



WHOLISTIC PEDIATRICS
& FAMILY CARE

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**Coronavirus/Respiratory Virus
Information and Recommendations**

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The information contained in this article is for general purposes only. This information is not intended to replace a consultation between a patient and a medical provider. We recommend consulting a qualified medical provider prior to beginning any treatment.

THIS ARTICLE CONTAINS THE FOLLOWING SECTIONS:

- I. Addressing the COVID-2019 Coronavirus
 - II. Daily supplements to strengthen the immune system against viruses
 - III. Therapies to use at the onset of respiratory symptoms
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I. ADDRESSING THE COVID-2019 CORONAVIRUS

Background Information on Viruses

Like all viruses, the current coronavirus belongs to a family of viruses. The particular coronavirus strain at issue right now (COVID-2019) is considered "novel", meaning it is new to humans. As a result, no one has developed prior immunity, which is why there are concerns about pandemic spread and why we will see the total number of confirmed cases and deaths continue to rise. The virus will keep spreading until enough people are exposed and become immune to it. According to the US Center for Disease Control (CDC), it will be at least a year before a vaccine will be available. But reports from Israel are that they may have a vaccine available as soon as in 4 months.

The COVID-2019 Coronavirus

Many people will not catch COVID-19, just like many people do not catch the flu. Though the current global mortality rate is reported to be around 2%, it is likely there are unreported cases of people who did not seek medical attention because they had only a mild case of the virus or may have had no symptoms. As a result, we do not know the



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actual mortality rate. For reference, in the United States the mortality rate is roughly 0.2% for measles (<https://www.cdc.gov/vaccines/pubs/pinkbook/meas.html>) and 0.1% for influenza (<https://www.health.com/condition/cold-flu-sinus/how-do-you-die-from-flu>). Note, mortality rates in the United States are usually less than the global rate due to our more advanced medical community. Mature adults and chronically ill people are most at risk. There have not been reported cases (to this point) of children getting overly sick. It should be noted that there currently are no specific medications or vaccines that target coronavirus.

General Recommendations

Wholistic Pediatrics & Family Care takes a proactive approach by optimizing overall health and the immune system. Besides eating well and exercising, having good vitamin D and zinc levels (which we define around the middle of a lab's reference range) seem to be very impactful by keeping the immune system strong, while not bringing about a hyperinflammatory reaction. Also, avoiding unnecessary antibiotics helps maintain good levels of intestinal flora, which aids in keeping the immune system stronger. According to the CDC, 50% of antibiotic prescriptions written in the United States for respiratory infections are unnecessary.

<https://www.cdc.gov/antibiotic-use/stewardship-report/outpatient.html>).

Wholistic Pediatrics & Family Care suggests the following to try to reduce the chances of contracting a debilitating case of COVID-19:

- Basic viral precautions such as frequent hand washing for 20 seconds with soap and water (a hand sanitizer with at least 60% alcohol can be used when soap and water is not available), not coughing on others, and not going to school or work (or other public places) for at least 24 hours from the end of a fever (over 100.4F).
- Maintain a 25 hydroxyvitamin D level over 50ng/ml
- Maintain a plasma zinc level above 90 mcg/dl
- Boost the immune system throughout the threat (see below)
- Boost the immune system on the first signs of illness or exposure (see below).
- N-95 masks are good for people who are sick, or are in close contact with someone who is sick, but it is not currently recommended that the general population wear masks. A newer, supposedly better mask being manufactured in Israel will reportedly soon be available to the public and sold on Amazon.



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II. DAILY SUPPLEMENTS TO STRENGTHEN THE IMMUNE SYSTEM AGAINST VIRUSES

These are doses of therapies that can be taken longer-term until the viral threat has been lessened:

1. **Vitamin D3** (*probably the most important*) - Vitamin D, while known for its use in calcium absorption, is also very important to help fight off infections. Quite possibly, part of the reason that the "flu season" occurs in the winter is because people do not spend as much time outdoors. If possible, people should get their 25-hydroxyvitamin D level checked and get the value above 50 ng/ml. If not able to check a level,

- Children under 25 lbs: 1000 IU
- Children 25-50 lbs: 2000 IU
- Children over 50 lbs: 3000 IU
- Adults: 5000 IU

If a person has a documented vitamin D deficiency, either revealed by testing or from lack of direct sun exposure (sunscreen blocks the formation of active vitamin D), one can consider taking 5 times the dose mentioned above for 1 week only to build up the body's levels and then drop down to the maintenance dose. For more information about vitamin D, go to www.vitamindcouncil.com.

Our office carries capsules of 2000 IU, 4000 IU, and 5000 IU, as well as a concentrated liquid that has 1000 IU per single drop.

2. **Probiotics** - This should preferably be a mixed product of lactobacillus and bifidophilus.

- Babies under 1 year old: 5 billion organisms per day
- Children 1-5 years old: 10 billion organisms per day
- Older than 5 years old: 20 billion organisms per day

Our office carries Kirkman Lacto/Bifido 8-Strain Low-Dose 12 Billion CFU's per capsule, Klaire Labs Ther-Biotic For Infants 5 Billion CFU's per scoop, Kirkman Lacto/Bifido 8-Strain 60 Billion CFU's per capsule, and Kirkman Pro-Bio Gold 20 Billion CFU's per capsule.



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3. **Vitamin C** - This should preferably be taken as Ester C or Buffered C.

- Young children (under 5): 25 0mg twice per day
- Older children and adults: 500 mg twice per day

Our office carries 250 mg, 500 mg, and 1000 mg capsules; 250 mg chewable tablets; and a powder that has 1100 mg per 1/4 teaspoon.

4. **Zinc**

- Children under the age of 4: 5 mg per day
- Older children and adults: 10 mg per day

Our office carries capsules of 25 mg and 50 mg, and drops that are dosed as 1 mg per drop.

5. **Vitamin A** - This should be taken in a mycelized natural or palmitate form (not one that is mostly Beta Carotene).

- Children 2-24 months: 1250 IU daily
- Children 2-5 years old: 2500 IU daily
- People over the age of 5: 5000 IU daily

Our office carries a concentrated liquid that is dosed as 1500 mcg (5000IU) per single drop (NOT A DROPPER FULL) as well as capsules that contain 25,000 IU.

6. **Arabinogalactan**

- Younger children (over 6 months of age): 1/4 teaspoon of the powder once per day
- Older children and adults: 1/2 teaspoon of powder or 2 capsules once per day.

Our office carries Pure Encapsulations Arabinogalactan 500mg capsules and Vital Nutrients Arabinogalactan powder.



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7. **Elderberry**

- Young children: 1 teaspoon daily
- Adults and older children: 1 capsule twice per day

Our office carries Gai/Professional Solutions Black Elderberry capsules, Gaia Herbs Black Elderberry Syrup, and Nature's Way Sugar Free Sambucus and an Organic Sambucus syrup.

8. **Selenium** - This powerful antioxidant has been shown in animal studies to decrease lung damage in mice that contracted influenza virus.

- Children under 1 year old: can safely take around 50 mcg daily
- Children 1-4 years old: 100-125 mcg
- Children over 4 years old and adults: 200 mcg daily.

Our office carries capsules of 100 mcg and a liquid that has 66 mcg per single drop. Give it in 2 divided doses if possible.

III. THERAPIES TO USE AT THE ONSET OF RESPIRATORY SYMPTOMS

1. **Elderberry** - an herb that appears to have direct antiviral activity. There is medical evidence that Elderberry can prevent or treat coronavirus (see references below). Children as young as 6 months of age can take elderberry. There are many elderberry products on the market. The recommended doses based on what we carry in the office are as follows:

- For older children and adults, we carry Black Elderberry Capsules (from Gaia/Professional Solutions): 2 capsules, 3 times per day
- For younger children and people who do not swallow pills, we carry Sambucus (by Nature's Way), which is an updated version of Sambucol.
 - Children under 4 years of age: 1 teaspoon, 3 times per day
 - Older children and adults: 2 teaspoons, 3 times per day
 - Note: there is a newer concentrated liquid extract from Gaia Herbs called "Black Elderberry Syrup". This product contains organic sugar,



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but it is also about 4-times more concentrated than the Nature's Way product, so 1/4 of the above dose would be given of that product.

Our office carries Gai/Professional Solutions Black Elderberry capsules, Gaia Herbs Black Elderberry Syrup, and Nature's Way Sugar Free Sambucus and an Organic Sambucus syrup.

REFERENCES: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3899428/>;
<https://mdanderson.elsevierpure.com/en/publications/antiviral-activity-of-sambucus-formosananakai-ethanol-extract-and>;
https://www.researchgate.net/publication/230841730_Anti-Influenza_Virus_Effects_of_Elderberry_Juice_and_Its_Fractions

2. **Vitamin A** - **See important dosing notes below regarding both women and the length of treatment*

This should be taken in a mycelized natural or palmitate form (not one that is mostly Beta Carotene). Vitamin A seems to have strong antiviral activity. **The dosing provided here is anecdotal, based upon my and other doctors' experience. Studies have not been done to confirm them.** The doses listed below are to be used twice a day for 2-3 days only. **These high doses may be problematic for people with clotting difficulty or liver disease.** It is advisable to give/take a 1/2 dose when not sick to make sure it is tolerated. Both liquid drops and capsules are available.

Dosing Notes:

- 1. If a woman is breastfeeding or pregnant, she should limit her Vitamin A intake to 50,000 IU per dose. If a baby is breastfeeding from a mother taking the above-listed dose of vitamin A, the baby can be given 1/2 of the children's dose mentioned above.*
- 2. High doses should never be used for more than 2-3 days in a row. The liver can be damaged if used for long periods of time at these doses.*

The amount given per dose:

- Children 2-6 months: 10,000 IU (3,000 mcg)
- Children 6-11 months: 15,000 IU (4,500 mcg)
- Children 12-23 months: 20,000 IU (6,000 mcg)
- Children 2-3 years: 30,000 IU (9,000 mcg)



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- Children 4-5 years: 40,000 IU (12,000 mcg)
- Children 6-7 years: 50,000 IU (15,000 mcg)
- Children 8-10 years: 75,000 IU (22,500 mcg)
- Children 11-14 years: 100,000 IU (30,000 mcg)
- People 15 years and older: 150,000 IU (45,000 mcg)

Our office carries a concentrated liquid that is dosed as 1500 mcg (5000 IU) per single drop (NOT A DROPPER FULL) as well as capsules that contain 25,000 IU.

3. **Vitamin C** - This should preferably be taken as Ester C or Buffered C. Doses listed below are the total amount per day and should be divided into 3-4 doses.

- Children under 1 year of age: give 100 mg per month of age (total per day)
- Children up to age of 5: 1000 mg per year of age (total per day)
- Older children and adults: 5000 mg per day.

If the stool becomes loose, the intestines are no longer absorbing more (and this is why some people use a higher dose to relieve constipation, but it is not dangerous if this happens).

Our office carries 250 mg, 500 mg, and 1000 mg capsules; 250 mg chewable tablets; and a powder that has 1100 mg per 1/4 teaspoon.

4. **Zinc** - This mineral should be given divided into at least 2 doses spread through the day. Doses listed below are the total amount per day, and should be divided into 2-3 doses throughout the day.

- Children 2-12 months old: 10-15 mg per day
- Children between 1-3 years old: 20-30 mg per day
- Older children (older than 3 years): 50 mg per day
- Adults: 75-100 mg per day.

Our office carries capsules of 25 mg and 50 mg, and drops that are dosed as 1mg per drop.



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5. **Arabinogalactan and Echinacea** - Arabinogalactan is found in highest concentrations when made from the bark of the Western Larch tree (We originally used a product called Larix as tablets, but the availability of this has been limited so we now carry capsules from Pure Encapsulations. These are easier to swallow but half the strength of the original Larix tablets. We also use the powder from Vital Nutrients). The active ingredient, arabinogalactan, is the same as Echinacea, which is believed to increase production of white blood cells to help fight the infection. Arabinogalactan has been found to be much stronger than Echinacea when using similar amounts, and can be used by patients over 6 months of age. ***Echinacea should not be used as a daily preventative.***

- Capsules
 - Adults and children over the age of 10: 4 capsules 3 times per day
 - Younger children who can swallow pills: 2 capsules 3 times per day
- Powder
 - Adults and children over 10 should use 1 teaspoon 3 times a day
 - Children under the age of 10 should use 1/2 teaspoon 3 times a day.
- Echinacea Alcohol-Free Extracts (if wishing to use instead of Arabinogalactan)
 - For children less than 12 months of age, alcohol free extracts of Echinacea can be used. ***Echinacea should not be used as a long term daily preventative.***
 - Children 2-6 months: 5 drops, 4 times per day
 - Children 7-12 months: 10 drops, 4 times a day
 - Children 1-2 years: 15 drops, 4 times a day
 - Children 3-4 years: 20 drops, 4 times a day
 - Children 5-6 years: 25 drops 4 times a day

Our office carries Pure Encapsulations Arabinogalactan 500mg capsules and Vital Nutrients Arabinogalactan powder; Gaia Herbs Echinacea Supreme alcohol-free drops