

The background is a collage of three images. The top-left portion is filled with a close-up of fresh blueberries. The top-right portion shows a hiker's leg in a grey sock and a brown hiking boot, stepping on a forest floor. The bottom-left corner features a bright sunburst filtering through green trees in a forest. A large, dark blue diagonal shape serves as a backdrop for the main text.

HEALTH & HEALING STRATEGIES TO:

# OPTIMIZE YOUR IMMUNE SYSTEM

**Natural Self-Care Approaches to Keep Your Immune System  
Healthy and Mitigate Risk from Viral Infections**

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## DISCLAIMER

*The reader acknowledges that the information in this document is provided for helpful general information only and should not be used as a basis for patient treatment. It is not intended as medical advice and should not be relied upon as a substitute for professional consultation with a qualified healthcare provider familiar with your individual medical needs.*

# Introduction

## Three Lines of Defense

As we face the COVID-19 pandemic and other viruses such as the flu, many wonder what they can do to avoid getting infected or to minimize the effects if they become ill. In general, there are three primary lines of defense against a virus.

### 1. SELF-DEFENSE

The first line of defense includes actions you can take to keep yourself healthy and strengthen your immune system. This can include proper hygiene, good self-care, and possible supplementation. While self-defense may not completely protect you from being infected, it may help reduce the duration or impact of the infection.

### 2. VACCINE DEFENSE

When effective and safe vaccines are developed, they can provide a second line of defense. If you have questions about vaccines, discuss them with your healthcare provider.

### 3. TREATMENT DEFENSE

Medical treatments that have been found effective against COVID-19 or other viruses can provide a third line of defense. This may include pharmaceuticals, medical devices, or therapies, typically administered in a clinical setting such as a hospital, urgent care clinic, or medical office.

All three lines of defense are important in order to protect the greatest number of people. The first line of defense—self-defense—is the focus of this document. Vaccine defense and medical treatment defense are beyond the scope of this document and will not be addressed.

This document offers suggestions and recommendations supported by medical literature that may provide a benefit to health and/or the immune system. However, its content is general in nature not intended as a substitute for professional medical advice, diagnosis, or treatment.

**Always seek the advice of your physician or other qualified health provider before making significant lifestyle changes or starting or modifying any treatment.**

# Health Strategies to Optimize Your Immunity

## OPTIMIZING THE IMMUNE SYSTEM

Since the best defense is a good offense, it's important to keep your immune system as strong as possible during the COVID pandemic—and any time viruses are in season. Practicing these immune-strengthening suggestions won't guarantee that you won't get sick, but may reduce the risk of falling ill and may minimize the impact if you do get sick.

Here are some important actions you can take daily to help strengthen your immune system:

### SLEEP

Prioritize your sleep. Most people don't get enough. Getting even an hour less sleep than you should may reduce the effectiveness of your immune system by up to 50%.<sup>1,2,3</sup>

#### Recommendation

*Get 7-9 hours of sleep each night (adults).*

#### Tips

*Turn off all electronic screens one hour before retiring. Before bed, reduce stress by practicing relaxation techniques. A warm bath or shower may also be helpful. Keep the same sleep schedule on weekends and holidays.*

### WATER

Stay well hydrated. Each cell of our body needs water to function properly, bringing in oxygen and nutrients and removing toxins. Drinking pure water helps keep excess inflammation down and helps keep your immune system balanced and strong.<sup>4,5,6,7</sup>

#### Recommendation

*6-8 glasses of pure water daily. Exercise and hot, humid weather can increase your need.*

#### Tip

*Drink 1-2 glasses of water within 30 minutes of rising in the morning.*

### EXERCISE

Exercise, but don't overdo it. Thirty to sixty minutes of brisk walking, biking, or swimming nearly every day improves your immune function.<sup>8,9,10</sup> Strength training with weights or resistance exercises is also important, especially as we age.<sup>11</sup> Avoid exercising to the point of exhaustion.

#### Recommendation

*30 minutes of brisk exercise 5-7 days a week.*

#### Tip

*Walking is the best exercise for most people since it is low impact and can be done almost anywhere.*

## AFTER MEALS

Light activity after meals moves glucose from the bloodstream to the cells, bringing down your blood sugar levels. This is particularly important for people with diabetes. High blood sugar may lower the body's immune response and increase blood vessel inflammation.<sup>12,13</sup> Those with diabetes, high blood pressure, heart disease, and/or obesity, are at higher risk for complications from COVID-19.

### Recommendation

*Take a 10-15-minute walk or do other light activity within 30 minutes of each meal.*

## FRESH AIR

Spend time outdoors daily. Outdoor air has higher concentrations of oxygen and other beneficial components (exception: highly polluted cities). Research shows that being outdoors for even twenty minutes a day boosts levels of vitality and strengthens the immune system.<sup>14</sup>

### Recommendation

*Take at least 20 minutes each day to be outdoors, preferably in green spaces. Get energized!*

## DEEP BREATHING

Most people take short, shallow breaths which can lead to increased anxiety and decreased energy. Shallow breathing allows natural killer cells to congregate in the blood vessels at the bottom of the lungs. Deep breathing can lower stress, increase energy, and boost the immune system. Deep breathing brings oxygen to the lower part of the lungs, shifting the white blood cells and natural killer cells into the bloodstream where they can do their work more widely.<sup>15</sup>

### Recommendation

*Take deep, controlled breaths using the following method: Sit comfortably upright with your spine straight. Breathe in slowly through the nose, filling your deepest lungs with air to a mental count of four. Hold your breath for a count of six. Exhale slowly through your mouth to a count of eight. Repeat 4-6 times.*

### Tip

*For deep breathing, the belly should move more than the chest. Practice deep breathing exercises several times every day.*

## HOT AND COLD SHOWERS

Hot and cold showers—or contrast hydrotherapy—can increase blood circulation, boost the immune system, and help speed healing.<sup>21,22</sup>

### Recommendation

*Every day, take a simple hot and cold contrast shower. Begin with your regular shower. When finished, turn up the water temperature to be as hot as you can tolerate without burning. Turn around in the shower to allow the hot water to heat both your chest and back. After 3-5 minutes of hot, switch the water to cold for 30-60 seconds. Dry off and dress as you normally would.*



## MANAGE STRESS

Everyone needs a certain amount of stress in their lives to stay engaged, creative, and energized. However, high levels of chronic stress suppress the immune system and place you at increased risk of contracting viral illnesses such as the cold or flu. Determine what causes you the most stress and seek solutions that are effective for you to reduce or manage your stress and put them into regular practice. For quick relief, try the recommendations below.<sup>16,17,18</sup>

### Recommendation

*When stress hits, try the following:*

- *Deep breathing—see recommendation.*
- *Stretch—both up to the sky and down to the ground.*
- *Rocking—for a brief interval, such as in a rocking chair; helps counterbalance the primary stress system.*
- *Progressive muscle relaxation—starting with the feet, tense a muscle group for 10-15 seconds and then relax it, systematically moving through all the muscle groups of the body.*

## SUNLIGHT

Sunlight not only produces vitamin D naturally which boosts your immune system, it also energizes the body's T cells that play a vital role in immunity.<sup>19</sup> Spending time in the sun during the day can improve your sleep at night and improve your immune system's resilience.

### Recommendation

*Aim for 10-20 minutes of sunlight daily. Don't overdo it and get a sunburn.*

## WARM FEET

Studies show that chilled feet make one more susceptible to the common cold. Cold feet apparently can depress the immune system.<sup>20</sup>

### Recommendation

*Keep your feet warm, especially in cooler weather.*

### Tip

*It may be especially beneficial to warm your feet at night to help you get better sleep.*

## PRACTICE YOUR FAITH

Studies show that those who have faith in God and attend weekly religious services have a stronger immune system and live longer than those who don't.<sup>23,24</sup>

### Recommendation

*Spend time each day connecting with God through prayer and reading Scripture or inspirational books. Participate in a weekly service of your faith community.*

## GRATITUDE

“An attitude of gratitude” may seem like nothing more than a nice platitude, but studies show that feeling grateful triggers good hormones that help us feel happier and that regulate the functioning of our immune system.<sup>25,26</sup>

### Recommendation

*Cultivate a daily habit of expressing gratitude to others and to God.*

*One gratitude expert suggests spending fifteen minutes every day writing down an event, relationship, or experience for which you are grateful. If you do this exercise within an hour of going to bed, you’ll experience the added benefit of a better night’s sleep.<sup>27</sup>*

## NUTRITION AND SUPPLEMENTS

### FRUITS AND VEGETABLES

Eat generously of fresh or frozen fruits and vegetables. They are rich in antioxidants, fiber, and essential nutrients to keep your immune system at its peak.<sup>28</sup>

#### Recommendation

*Eat at least 5-9 servings of fruits and vegetables every day.*

#### Tip

*Greatly minimize your intake of processed foods and emphasize fresh produce.*

### BEANS AND LENTILS

Beans and lentils help to keep your immune system healthy by increasing the health of your gut microbiome (the community of microorganisms in your gastrointestinal tract, many of which are beneficial to your health). Be sure to include beans and lentils in your daily diet.<sup>29</sup>

#### Recommendation

*Eat at least a half cup of beans or lentils every day.*

### HERBS AND SPICES

Herbs and spices such as garlic, turmeric, ginger, oregano, and paprika (“spices that are not spicy”) may help the body’s ability to fight infection. Include them in your dishes every day to help boost your immune system.<sup>30,31,32,33</sup>

#### Recommendation

*Wherever possible, incorporate fresh herbs and spices into your daily meals including garlic, turmeric, ginger, oregano, and paprika.*

### SELENIUM

The trace mineral selenium may help protect the immune system against harmful mutations of viruses.<sup>34,35</sup>

#### Recommendation

*Eat a Brazil nut or two daily to meet the Recommended Daily Allowance (RDA). The RDA for both men and women is 55 mcg/day. A typical Brazil nut contains about 90 mcg. Whole grains and seeds also tend to have significant amounts of this important mineral.*

### SUGAR

Avoid sugar, including sugar added to processed foods. High sugar intake inhibits the body’s immune response.<sup>36</sup>

#### Recommendation

*Reduce or eliminate the amount of refined sugars you ingest. Read labels. Watch for hidden sugars such as those ending in -ose (sucrose, glucose, fructose, etc.).*



## VITAMIN D

Most Americans are deficient in vitamin D. It is really a hormone, not a vitamin, and is necessary for proper immune function. It may also help regulate inflammatory response, decreasing the risk of experiencing a cytokine storm\* if one gets ill with COVID-19 or other infectious illnesses. Get your vitamin D levels checked before you get sick and “fix” it by supplementation if deficient. Your blood vitamin D levels should be at the upper end of normal, which many experts set at 40-80 nmol/L.<sup>37,38,39</sup>

### Recommendation

*Consider daily vitamin D supplementation of 1,000-4,000 IU for adults.*

## N-ACETYL CYSTEINE (NAC)

NAC comes from the amino acid L-cysteine. It helps boost cellular glutathione levels. Glutathione is a powerful “homemade” antioxidant in your body which helps support the immune system. NAC has been shown to inhibit virus replication and reduce inflammation in the cells of the lungs. NAC is on the WHO’s Model List of Essential Medicines.<sup>40,41</sup>

### Recommendation

*Take 600 mg. once a day.*

## ZINC

The trace mineral zinc plays an important role in the development and function of immune system cells. It helps the immune system defend against invading viruses and bacteria.<sup>42</sup> Zinc is common in a variety of whole plant foods.

### Recommendation

*Eat plenty of whole plant foods to ensure you are getting enough zinc. Legumes, nuts, and seeds are good sources. As people age, they tend to become deficient in zinc, so those 50 and older may consider a supplement as well. The Institute of Medicine and National Institutes of Health report that 40 mg. a day is a safe maximum amount to take.<sup>43,44</sup>*

## MELATONIN

Melatonin is a hormone produced by your body. Many think of it as something that helps to get good sleep. Melatonin is also a natural antioxidant, antiviral and anti-inflammatory. As we age, our bodies produce less melatonin. Research suggests melatonin supplements, especially in older adults, to help strengthen the immune system against viruses.<sup>45,46</sup>

### Recommendation

*Especially with older adults, it may be prudent to take 2-3 mg. of melatonin about 30 minutes before bedtime to help boost your immune system.*

\*Cytokines are part of the immune system and normally help the body battle infection, but at times the body produces an exaggerated immune response, rapidly releasing an excess amount of cytokines. This storm of inflammatory cytokines can lead to organ failure and death.

# PRODUCTS AND PROCESSES TO HELP PROTECT YOURSELF AGAINST COVID-19

## CDC RECOMMENDATIONS

The current recommendations from the Centers for Disease Control and Prevention (CDC) may be found at <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>.

## HAND HYGIENE

One of the first lines of defense in staying free of a viral infection is keeping your hands clean. It's easy to transfer a virus from the hands to the mouth, nose, or eyes, where it gains an entrance into the body.

### Recommendation

*Wash your hands regularly throughout the day with soap and water for at least 20 seconds—especially if you are in a public area or workspace, or if you touch something you suspect may have the virus on it. Avoid touching your face—especially mouth, eyes, and nose. If you are not able to wash your hands, use a sanitizer or wipes containing at least 60% alcohol.*

## KEEP HIGH-TOUCH AREAS IN HOME/CAR CLEAN

It is known that viruses (especially the SARS-CoV-2 virus) can remain intact on surfaces for some hours, and possibly even days, making it possible to infect a person after their initial contact with the surface.

### Recommendation

*Clean and disinfect high-touch surfaces daily with at least 70% alcohol or other approved disinfectants. High-touch areas may include: car steering wheel and handles, doorknobs, light switches, counter tops, etc.*

## PHYSICAL DISTANCING

The spread of viruses occurs frequently among those who are in close contact with others for a prolonged period of time. This spread occurs through airborne droplets as people talk, sneeze, or cough.

### Recommendation

*The CDC recommends keeping at least six feet—two arms' length—from others not in your household, both indoors and outdoors. Cover your mouth and nose with your elbow or a tissue if you cough or sneeze. Throw away used tissue.*

## MASKS

Mask wearing is recommended—and required in some cases—to help curb the spread of viruses. Properly fitted masks made with inner filter pockets, 2-3 layers of fabric, or tightly woven fabric offer better protection than those that fit loosely, are made with a single layer, or loosely woven fabric.

### Recommendation

*Wear a face mask covering the nose and mouth whenever you cannot physically distance from others and while in public indoor spaces.*

## **PULSE OXIMETER**

This small, inexpensive device clips onto your finger and quickly measures both your heart rate and blood oxygen levels. It may help you decide if you need to go to the hospital. Blood oxygen levels should be between 90 and 100 percent. You should probably see a doctor if your reading is less than that.

## **UV LIGHTBOX/WAND**

UV-C (short-wave) ultraviolet light is the only band in the light spectrum that has been shown to inactivate viruses and kill bacteria on surfaces. UV lightboxes are readily available on the internet for disinfecting objects such as keys, cellphones, masks, mail, and other small objects. Wands are used for disinfecting any surface, such as sinks, counters, faucets, tables, and pillows. It is used by passing the wand over the surface for a particular period of time.<sup>47</sup>

### **Recommendation**

*Purchase a lightbox and/or wand to disinfect objects and surfaces.*

## **EYE PROTECTION**

Since the SARS-CoV-2 virus can enter the body through the facial orifices—the mouth, nose, and eyes—wearing a clear plastic face shield or goggles as well as a mask can protect your eyes from becoming a site of entry for the virus. You may consider wearing eye protection if you are in a place where it is difficult to physically distance.<sup>48</sup>

### **Recommendation**

*Face shields and goggles are an inexpensive and reusable way to help protect yourself from SAR-CoV-2 when in places where it is difficult to physically distance.*

# Healing Strategies for When You Feel Ill

## IF YOU FEEL YOU'RE GETTING SICK

Generally speaking, it is best to begin self-care treatment strategies as soon as you start feeling ill. Better outcomes may be achieved by acting quickly and decisively upon experiencing the first symptoms. While you are well, it is best to be proactive and gather all supplements you plan to use and not wait until you begin to feel sick. The following includes natural self-care strategies you can use to help ease or eliminate the symptoms of an illness:

### ACTIVATED CHARCOAL TABLETS

Charcoal's ability to adsorb toxins and other harmful substances is well known and has been used for centuries as a universal antidote. Holding an activated charcoal tablet or two in your mouth and letting it slowly dissolve allows the charcoal grains to wash down your throat where they may come in contact with any virus or bacteria there.<sup>49</sup>

#### Recommendation

*Use this regimen at the first sign of a sore throat. Do not take it at the same time as medications or supplements as it may decrease their absorption.*

### VITAMIN D

Having low levels of vitamin D leaves one susceptible to various infectious diseases, especially upper respiratory tract infections. Vitamin D is involved in the maturation of certain white blood cells. Besides helping boost the immune system, it may also help to regulate it, as those with normal levels of vitamin D are less likely to experience a cytokine storm than those who are deficient<sup>50,51</sup>

#### Recommendation

*Some researchers recommend taking a large dose of 50,000 IU daily for 3-7 days if you feel yourself becoming ill.<sup>52</sup> Do not take such a large dose for more than seven days. If you live in a place where the sun is high enough in the sky for your body to produce vitamin D, spend time in the sun daily to help your body produce it.*

#### Tip

*If your shadow is longer than you are tall, it is too early or late in the day for your body to produce vitamin D. For several months in the winter, if you live above the 35th parallel (southern Tennessee), your body will not be able to produce vitamin D from sunlight so you should consider taking a supplement during that time.*

## ZINC

Zinc is an essential trace mineral that needs to be taken daily, either naturally in food or as a supplement. It is common in a variety of whole plant foods. Taken within 24 hours of the onset of symptoms, zinc has been shown to reduce the symptoms and duration of the common cold. Similar results may be possible for COVID-19 or other viruses. Current studies using zinc for COVID-19 show some promise.<sup>53,54,55</sup>

### Recommendation

*Take zinc as a supplement—research recommends taking 75 mg daily during the duration of your viral infection—beginning as soon as you feel you are getting sick.*

### Tip

*Some experts suggest that holding a zinc lozenge at the back of your mouth is effective in killing coronaviruses and other viruses in your throat and nasopharynx.<sup>56,57</sup> If you feel a sore throat beginning, try a zinc lozenge, allowing it to dissolve in your mouth slowly. You can use a zinc lozenge like this every 2-4 hours. If you use zinc lozenges, reduce the amount of other forms of zinc so as not to take more than 75 mg/day during the duration of the illness.*

## QUERCETIN

Quercetin is a flavonoid found abundantly in plant foods, such as onions, greens, and fruits. It is an anti-inflammatory and antioxidant. Quercetin may assist zinc getting into cells, allowing the zinc to lower the viral load and inhibit viral replication. It has been successfully used in the treatment of Ebola and Zika viruses. It is being studied for COVID-19.<sup>58,59</sup>

### Recommendation

*Supplementation with quercetin and zinc together if you feel you are becoming ill may be a prudent addition to your regimen. Since there have been no studies yet on this regimen, there is no recommended dosage. Rather than taking a supplement, you could use elderberry syrup for the quercetin and eat more Brazil nuts for the zinc.*

## VITAMIN C

Deficiency in vitamin C causes impaired immunity. Whereas in normal circumstances, one can get sufficient vitamin C from eating plenty of fresh fruits and vegetables, if you feel yourself getting ill, it may be prudent to take several large doses of vitamin C in the form of supplements. Vitamin C has shown antiviral effects against the influenza virus; it may have benefit against the COVID-19 coronavirus as well.<sup>60,61,62,63,64</sup>

### Recommendation

*Some research indicates that taking 8 g/day of vitamin C as close to the onset of symptoms as possible will shorten the duration of the common cold. Multiple early studies on the use of vitamin C in the prevention and treatment of COVID-19 show promising results.*

## N-ACETYL CYSTEINE (NAC)

NAC inhibits the replication of viruses and reduces inflammation in the epithelial cells of the lungs. It has been used for decades and rarely has side effects, most of which are mild.<sup>65,66,67,68</sup>

### Recommendation

*Take 600 mg. of NAC twice daily.*

## SELENIUM

Studies show that selenium is used up by the immune system when it is fighting off a virus, so taking extra will help keep your levels up if you are getting sick. Selenium may reduce the virus's ability to replicate and mutate.<sup>69,70,71,72,73</sup>

### Recommendation

*Take a supplement of selenium to up your dose when fighting off a virus. Or eat more Brazil nuts or other selenium-rich foods. The Institute of Medicine sets the Tolerable Upper Intake Level (UL) for adults at 400 µg (5.1 µmol)/day.<sup>74</sup>*

## IODINE

The mineral iodine is important internally for proper thyroid function but it is also currently being studied to treat patients with Acute Respiratory Distress Syndrome (ARDS), which can be a complication of severe COVID-19 and other conditions.<sup>75,76,77</sup> Externally, iodine is a known disinfectant that kills viruses. Iodine has been shown to help combat respiratory viruses. Research after the 1918 flu pandemic found that iodine vapor killed aerosolized H1N1 virus, the 1918 flu virus.<sup>78</sup>

### Recommendation

**Internal:** *It may be prudent to take small amounts of daily potassium iodide internally if you begin to feel symptoms of viral infection. The Upper Tolerable Limit for adults is 1100 µg/day or 1.1 mg/day.*

**External:** *Liquid potassium iodide, which is clear and non-staining, can be used as a spray on your face, in your nose, and on your hands to help kill viruses. One in vitro study found that an iodine nasal antiseptic at a concentration as low as 0.5% inactivated the SARS-CoV-2 (COVID-19) virus in fifteen seconds.<sup>79</sup>*

## MELATONIN

Melatonin helps to regulate the immune system, helping to protect it while also ensuring it does not react excessively, such as in a cytokine storm. Research suggests the use of melatonin in COVID-19 patients to protect the lungs from damage and avert a cytokine storm.<sup>80</sup>

### Recommendation

*Especially with older adults, it may be prudent to take 2-3 mg. of melatonin about 30 minutes before bedtime to help your immune system if you feel yourself falling ill.*

## ELDERBERRY

Elderberries have been used for hundreds of years to boost the immune system and fight the cold and flu. Though good scientific evidence is still needed, some studies give validity to that long-held belief. In one study, elderberries inhibited the early stage of a viral infection, so that even if the cells were infected, the virus was not able to replicate. The elderberry also inhibited viral replication when the virus had already infected the cells.<sup>81</sup>

### Recommendation

*Consider having elderberry syrup on hand in case you begin to feel sick. Follow the instructions on the package.*



## HYDROTHERMAL THERAPY TREATMENTS

Hydrothermal therapy, or hydrotherapy, was used extensively before the advent of antibiotics, and is recognized in many European and Asian countries as having therapeutic benefit. It harnesses the power of hot and cold water to boost the immune system and ward off illness.<sup>82,83,84,85,86</sup>

### Recommendation

*Take a hot and cold contrast shower when you begin to feel sick. To make it a more effective “treatment,” have the shower water as hot as you can tolerate for 3-5 minutes, then switch to cold for 30-60 seconds. Repeat the hot and cold three times and finish with cold. Other hydrotherapy techniques that may be helpful are a hot foot bath, or fomentations with a hot foot bath. To find instructional hydrotherapy videos for these techniques, search for the terms “hot and cold shower,” “fomentations,” and “hot foot bath” on YouTube.*

# Possible Supplement Schedule

## FOR HEALTH

Supplement	Daily Dosage	When to Take
Vitamin D	1000-4000 IU	At breakfast or lunch
Zinc	8-11 mg, up to 40 mg max	At breakfast or lunch
Selenium	1-2 Brazil nuts	At breakfast or lunch
N-acetyl Cysteine (NAC)	600 mg once daily	At breakfast and lunch
Melatonin	2-3 mg if needed	30 minutes before bedtime

## FOR HEALING

Supplement	Daily Dosage	When to Take
Activated charcoal tablets	1-2 dissolved in the mouth	At onset of symptoms, 2 hrs. between meals or meds
Vitamin D	50,000 IU for 3 days	At onset of symptoms, best with food
Zinc*	75 mg during duration of viral infection	25 mg with meals 3x/day
Zinc lozenges*	Every 2-4 hours at symptom onset	As needed
Quercetin	Eat more high-quercetin food, including elderberry syrup	At breakfast or lunch
Vitamin C	Up to 8 g/day at symptom onset	At breakfast and lunch
N-acetyl Cysteine (NAC)	600 mg twice daily	At breakfast and lunch
Selenium	Tolerable upper limit: 400 mcg	At breakfast or lunch
Melatonin	2-3 mg	30 minutes before bedtime
Elderberry Syrup	Follow instructions on label or 2 tsp. 4x/day for intensive use	At breakfast, lunch, and supper

NOTE: The above supplement chart shows suggested amounts of each supplement based on current data. It is not meant to be a prescription but an example. However, always consult with your physician before beginning a supplement regimen.

\*Zinc is an essential trace mineral that is not stored in the body so must be replaced regularly. Be careful not to take too much zinc. It can be toxic in high doses. For example, if you are taking zinc lozenges, reduce the amount of other forms of zinc so that you are not getting more than 75 mg per day during the duration of a viral infection. Forty mg is the upper daily limit when you are not ill.

# Sample Daily Routine If You Feel Ill

6:00 am	Rising time. Rise, drink 16-24 ounces of very warm water. Charcoal. If your throat feels sore, hold 1-2 charcoal tablets in your mouth, letting them dissolve.
7:00 am	Shower. Take a hot and cold contrast shower, 3-5 minutes of hot, 30-60 seconds of cold up to three times each. End with cold. Dry off. Get dressed. Avoid drafts. Do not allow even your feet to be chilled; put on socks.
8:00 am	Breakfast. Eat a simple whole-food, plant-based breakfast. Eat plenty of fresh fruit, nuts, and grains but don't eat too much. Avoid sugars in food. Take supplements with your meal based on the Healing chart above.
8:45 am	Walk. Take a 5-30-minute walk after your meal, as you can tolerate. (If you feel weak, you may not be able to walk far.)
9:15 am	Rest. It's best to sit and rest but lie down if you must.
10:30 am	Water. Drink 16 more ounces of water. Room temperature is best.
11:00 am	Hot foot bath. Take a hot foot bath for 20-30 minutes or another hot and cold contrast shower. After the foot bath or contrast shower, lie down, covered, for 30-60 minutes to allow for the reaction. If you have perspired, take a cool shower afterwards.
1:00 pm	Lunch. Eat a whole-food, plant-based lunch. Eat plenty of fresh vegetables, legumes, and whole grains, but don't eat too much. Avoid sugar in food. Take supplements with your meal based on the Healing chart above and how much you took at breakfast.
2:15 pm	Walk. Take a 5-30-minute walk as you did in the morning.
3:00 pm	Rest. It's best to sit but lie down if you must.
3:30 pm	Water. Drink 16 more ounces of water. Room temperature is best.
4:00 pm	OPTIONAL: Do another hydrothermal therapy treatment, such as a hot foot bath or fomentations.
6:30 pm	Supper. Eat a light supper, such as fruit and plain toast.
7:30 pm	Water. Drink 8 ounces of water. Room temperature is best.
8:30 pm	Spend 15 minutes writing down an event or relationship you are thankful for.
9:00 pm	Shower. Take a short hot and cold contrast shower just before bed. End with warm water.
9:30 pm	Bedtime. Get in bed right after your shower.

NOTE: The above daily routine is a general sample showing one way you could incorporate some healthy practices, supplements, and hydrotherapy into your day. It is not meant to be a prescription but an example.

# Health and Healing Strategies to Optimize Your Immune System

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# Endnotes

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