

**The Quick Start Guide
To Be**

**IMMUNE
STRONG**



Dr. Venus

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The Quick Start Guide To Be Immune Strong

by Dr. Venus

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Introduction

This book was written to give you a place to start as you take steps to optimize your immune health. Because the immune system operates in a network of various processes in the body, there are many aspects of that system you can address to keep it performing at a high level. While this is not an all-encompassing review of diet, activity, and supplement strategies, the information provided here should serve as a good foundation upon which you can build your immune system to become the dependable guardian of your health that you desire.

Overview

Let's begin with an outline of the top strategies to become IMMUNE STRONG:

- [Eat a healthy diet.](#)
- [Get adequate exercise.](#)
- [Get deep, restorative sleep.](#)
- [Relieve stress.](#)
- [Soak up some sunrays.](#)
- [Check your vitamin D level and optimize it.](#)
- [Get enough vitamin C.](#)
- [Get adequate intake of zinc.](#)
- [Consume probiotic foods or supplements.](#)
- [Consider herbal foods and supplements.](#)

Eat A Healthy Diet

Your entire body depends on good nutrition and that includes your immune system. Avoid processed and traditionally fried foods as they tend to be more inflammatory. Limit your consumption of added sugars. Not only does sugar trigger a cascade of inflammation in your body, it can also suppress certain immune responses. Studies have shown that consuming sugar can slow the ability of white blood cells to engulf bacteria and the effect can last for a few hours.

Focus on a whole food diet. Eat plenty of fruits and vegetables as their polyphenol content can help reduce inflammation and enhance your immune response. Be sure to include dark green, leafy vegetables such as kale, spinach, and bok choy as they are rich in folate, vitamin c, and vitamin k which contribute to immune health. U.S dietary guidelines recommend 1-1/2 to 2 cups of fruit and 2 to 2-1/2 cups of vegetables per day.

Get Adequate Exercise

There is ample evidence that the immune system benefits from regular physical activity. Exercise increases the production of macrophages, the immune cells that target and destroy harmful organisms like viruses and bacteria. It also supports your blood circulation, improving the flow of lymphatic fluid. This fluid is what travels through your tissues to remove unwanted substances like toxins, bacteria, and waste products. Moreover, exercise triggers the release endorphins in your body to help relieve stress.

A good goal is to do 30 to 40 minutes of moderate exercise per day, 5 to 6 days per week. If you're not able to complete a full 30 minutes in one session, you can break it up into 10 to 15-minute chunks. You may also choose to do more vigorous exercise for 15 to 20 minutes per day.

Moderate exercise is activity at an intensity level during which you can talk, but not sing (about 50% to 70% of your maximum heart rate). Examples are dancing, brisk walking, and biking slower than 10 miles per hour. During vigorous exercise (about 70% to 85% of your maximum heart rate), you can only say a couple words before having to pause for a breath. This includes activities like running, jumping rope, and hiking uphill (or with a weighted vest).

It's important not to overtrain, as that can cause some immune suppression. If you already have a weak immune system, you should be even more careful to avoid exercising too frequently or too intensely. Remember to get sufficient recovery time in between workouts as well. If you're feeling very thirsty all of the time, experiencing more fatigue than usual, or having muscle aches that last beyond the usual 1 to 2 days of delayed onset muscle soreness, then you may want to throw in a day of rest or back off your exercise intensity.

Get Deep, Restorative Sleep

According to the CDC, adults should aim to get at least 7 hours of sleep each night. Inadequate sleep increases inflammation and impairs your body's ability to combat infection.

There was a 2009 study that showed that people who slept less than 7 hours each night were 3 times more likely to catch a cold. Research has also found that sleep can improve the immune response to a vaccine and may even help T cells capture their targets. You can think of T cells as the soldiers of your "immune army" in your battle against infection.

Dr. Anne Kennard, board certified OB/GYN fellowship-trained in integrative medicine, believes deep, restorative sleep can be achieved through very intentional habits. She describes, "Turning off electronics several hours before bed; keeping [electronics] out of the bedroom; keeping the room dark and cool; waking and sleeping at the same time approximately every day; getting outside in some of the morning hours just to get natural melatonin production to be in appropriate circadian rhythm." Dr. Kennard explains that these are habits that promote good sleep hygiene.

Relieve Stress

The connection between the immune system and stress is one that has been long recognized. If not you, then most certainly many people you know can relate to the experience of coming down with a cold or flu after being stressed out, whether it's due to work, family, or a major life change.

In truth, the connection is a complex interaction between various processes in your body involving the immune system, hormonal system, and central nervous system (CNS, for short). The emotional weight of stressful situations can throw off the function of this intricate network of systems.

The initial response of your immune system to a stressful event is actually designed to protect your body and maintain your health. Since your brain (part of the CNS) perceives stress as a danger, it sends signals through the hormonal system to move immune cells to areas of your body most likely to be injured.

In case of a wound, the immune cells are directed to the skin. They also move into the lungs, as well as the urinary, reproductive, and gastrointestinal tracts in case you need to fight an infection. This movement of immune cells is one example of how stress stimulates your immune system in the short-term. It is the appropriate biological response adapted by humans to ensure survival when an acute stress, lasting minutes to hours, occurs.

Be aware, however, that there is a downside to this acute response. If you have an inflammatory condition like hay fever or atherosclerosis (hardening and narrowing of arteries), or if you have an autoimmune disease (like psoriasis or rheumatoid arthritis), triggering increased immune activity could be harmful to your body.

Now when stress goes on to become chronic, such that you've been in stressful situations for weeks or even months without adequate relief, the immune system can then become suppressed. One explanation for this effect is that chronic stressors cause a prolonged or repeated activation of the pathway which produces cortisol, the stress hormone. So much cortisol gets formed that the cells which are supposed to recognize the hormone end up shutting down and become resistant to it.

Research on individuals under chronic stress has showed that they have delayed wound healing, mount a weaker immune response to vaccination, and are more susceptible to developing the common cold.

Giving your body adequate relief from the negative effects that life's stressors can bring is essential to maintain your health and keep your immune system functioning effectively as your guardian and protector. There are several ways to alleviate the stress in your life.

- **Take a break.** Sometimes you just need to step away from the activity that is creating tension. If you're able to take a break from your stressor, then you may be able to prevent overwhelm and perhaps come back to a stressful, but necessary, endeavor with a fresh perspective that is more positive and productive.
- **Laugh.** Laughter is a fun way to boost your immune health. Not only can it ease your stressed mental state, it can also create physical changes in your body.

Laughter has been shown to lower levels of cortisol and adrenaline (the stress hormones). It can also boost immune cell and antibody activity. While initially stimulating your stress response, including heart rate and blood pressure, a good laugh reduces these factors allowing you to settle into a more relaxed feeling. Moreover, when you laugh, the brain is triggered to release endorphins, the “feel-good hormones.”

- **Exercise.** Regular exercise benefits your mind as well as your body. It reduces stress hormone levels and it signals the production of endorphins. Except when you are ill, you can exercise for stress relief nearly every day. Almost any type of exercise will provide some benefit.
- **Meditate.** Mental stress can manifest in your body in various ways. It may increase your heart rate, raise your blood pressure, and speed your breathing. By exercising your mind through meditation, you can relax your body.

Studies on yoga masters have shown that meditation can decrease heart rate, lower blood pressure, slow down breathing, reduce the body’s consumption of oxygen, and even change skin temperature. When you meditate, you can lower your cortisol and adrenaline levels and decrease inflammation. Start with 10 to 15 minutes of meditating 3 or 4 times per week.

- **Perform a breathing exercise.** By focusing on your breath, you can learn to calm your mind and body. Here are a few techniques you can try.
 - ✓ **Mindful breathing.** Simply become aware of your breath and turn your focus on it. Don’t worry about trying to change the way you breathe. When you focus on your breath, your body generally slows down the breathing pattern so that you can feel more calm. As your mind stays centered on the movement of air through your nose and mouth, going in and out of your lungs, it can feel like a relaxing meditation.
 - ✓ **Belly breath.** This type of breathing has a built-in self-check. Lay on your bed or a reclining chair, then put the palm of one hand flat on your abdomen and place the other hand on your chest. As you breathe, feel your body inhaling and exhaling air by noting the movement of your abdomen. Make sure that the hand on your chest is not the one going up and down. Note that as you exhale, you contract the abdominal muscles and squeeze the air out of your lungs.
 - ✓ **4-7-8 Breath.** Anne Kennard, DO, FACOG, is a board-certified obstetrician-gynecologist, fellowship-trained in integrative medicine who

recommends the 4-7-8 breath as a method “that someone could use to decrease stress quickly.” She learned the technique from her mentor Dr. Andrew Weil who developed it using pranayama (yoga breathing) as a foundation.

“To decrease the stress response, the exhale needs to be lengthened compared to the inhale,” says Dr. Kennard. To perform the 4-7-8 breath, you should first inhale for a mental count of 4. Then, hold your breath for a count of 7. Finally, exhale for a count of 8.

Dr. Kennard says, “The person will start to notice their physiology change rapidly. It only takes about 4 rounds.

“That’s a great [breathing exercise] for morning...or before bed, or any time the world starts to feel a little bit overwhelming. You’ll feel better, your immune cells will work better, and you’ll sleep better.”

Foods and supplements for stress relief:

Vitamin C can help defend you against the negative effects of stress. Researchers in Germany found that those who took Vitamin C had lower blood pressure and lower cortisol compared to those who did not after being given tasks like presenting a speech and doing difficult math problems.

[Quercetin](#) is an anti-inflammatory compound that can help inhibit the production of cortisol when you are stressed. Take it as a supplement or find it in foods like apples, bell peppers, [green tea](#), and red onions.

[Selenium](#) is a mineral that can be helpful to relieve anxious feelings you may have when you are stressed. It is available in supplement form can also be found in foods such as seafood (especially fish), organ meats (like liver and kidney), and Brazil nuts. When choosing a supplement, look for "selenium glycinate" in the ingredients as it has a high level of absorption in your gut.

Magnesium is another mineral that can be very calming. It is able to act on the blood-brain barrier, preventing stress hormones from entering the brain. [Magnesium glycinate](#) is a form that is highly absorbable and can raise your levels quickly. Choose a supplement or eat foods like celery, spinach, avocado, and dark chocolate.

Omega-3 fatty acids have many health benefits. One such benefit is helping to reduce the production of stress hormones. Omega 3’s are found in foods like walnuts, cashews, grass fed beef, and fatty fish (including tuna and salmon). When choosing a supplement, make sure you see the most important fatty acids, [EPA and DHA](#), on the ingredient list.

Remember, it's always a wise to check with your healthcare provider before starting a new supplement. This is an especially good idea if you have a medical condition or are taking any medications.

Fish oil is a potent source of omega-3 fatty acids, which can also reduce inflammation. Omega-3s are also associated with improved mood and memory, and decreased risks of depression and dementia. Research has demonstrated all of these benefits with two specific types of omega 3s — EPA and DHA.

In the case of omega-3 intake, you might consider it better to opt for fish oil supplements as opposed to eating adequate amounts of fish due to concerns over mercury content in the latter. When choosing a fish oil, be sure to opt for fish sources that have been tested and shown to be free of mercury and other toxic components.

Soak Up Some Sunrays

Your skin uses ultraviolet B (UVB) light from the sun to make Vitamin D, an important regulator of your immune system. Moreover, research has shown that blue light found in sunrays directly activates key immune cells to move faster.

Of course, always use caution and avoid the health dangers of prolonged sun exposure, namely sunburn, heat stroke, and skin cancer. Aim to be in the sun for 15 to 20 minutes each day. To get the immune system benefits, it should be unprotected exposure, meaning that you have not applied any sunscreen product.

Check Your Vitamin D Level And Optimize It

Vitamin D is one of the most important vitamins that contribute to your immune health. But it can be difficult to maintain sufficient levels of it. If your skin was exposed to enough sunlight, you could make adequate vitamin D. However, the risks of prolonged sun exposure make that difficult to do.

To protect against skin cancer, we often apply sunscreen whenever we do get out in the sun. When properly applied, sunscreen reduces our ability to absorb vitamin D by more than 90%. Furthermore, in urban and polluted areas, UVB light gets filtered out, so even though you may be getting sun exposure, your skin may not be getting enough UVB light.

Other factors that can contribute to vitamin D deficiency are obesity, darker skin color, and problems absorbing fat (e.g., gluten, infections, or toxins could be causing an intestinal problem like “leaky gut”).

When testing for vitamin D, the form that is measured is 25-hydroxycholecalciferol (or 25-hydroxy vitamin D). The Endocrine Society, a leading endocrine research

organization, recommends a 25-hydroxy vitamin D blood level of 30 ng/mL as a minimum and, if levels are below that, a daily supplement of 1500 to 2000 IU.

However, Veronica Anderson, MD, an integrative physician certified in functional medicine, explains, “Optimal [level] tends to be 60-100 [ng/mL] in range.

“What I do with my clients initially... even before I test them, I will put them on 10,000 IU of vitamin D3,” says Dr. Veronica. “When it’s difficult to go to the lab, there’s a shortcut that we use. For every 20 pounds of body weight, take 1000 IU of Vitamin D.” She does advise, however, that you check with your doctor before starting this dose.

Although five types of vitamin D exist, the body primarily uses vitamin D2 (also called ergocalciferol) and vitamin D3 (cholecalciferol). In order to be absorbed, the body must first convert both forms of the vitamin. Because [vitamin D3](#) undergoes this process more quickly and effectively than vitamin D2, it is the preferred form for use as a supplement.

You can also get vitamin D from egg yolks, fatty fish (like salmon), and organ meat (like beef liver).

Get Enough Vitamin C

[Vitamin C](#) is essential for the growth and repair of your body’s tissues including bone, skin, and blood vessels. It can not be produced by the body and must be replenished daily. As a powerful antioxidant it combats the damaging effects of free radicals which is why it is associated with preventing conditions like cancer, cataracts, and heart disease. It can speed wound healing, boost the immune system, and aid in the absorption of iron.

For people under increased physical stress, vitamin C has been shown to decrease the risk of developing the common cold by 50%. While this reduced risk has not been seen in the average population, studies have found that regular supplementation of at least 200mg of vitamin C may help decrease the duration of the common cold or lessen the severity of symptoms.

In fact, there are many health practitioners who advise at least 1000 mg/day. Dr. Veronica actually recommends a much higher dose of Vitamin C. She says, “People who are staying well are taking 3 to 5 grams per day.” To find the appropriate dose for you, she suggests to increase your daily dose until you get to “bowel tolerance.” She explains, “Take enough until you get to the point where your stools are loose, then back off [the dose] a little bit.”

Gastrointestinal symptoms like nausea and diarrhea are risks when taking Vitamin C. Also be cautious about vitamin C supplementation if you have a history (or family history) of kidney stones or a condition which increases iron accumulation in the body.

Vitamin C is also known as ascorbic acid. Although it's considered a weak acid, it does not make your body more acidic. In fact, foods rich in Vitamin C are alkaline-forming because as the body burns the acid, it leaves an alkaline end-product. However, the acidity may still affect your stomach as Vitamin C travels into your gastrointestinal tract. So if you avoid acidic foods because of a sensitive stomach – perhaps you have a gastric condition like acid reflux (gastroesophageal reflux disease) or a peptic ulcer – then you'll want to take a [buffered form of Vitamin C](#).

Get Adequate Intake Of Zinc

[Zinc](#) is essential for the development and function of your immune cells. It's recommended that you do not take above the tolerable upper intake level of 40 mg per day, unless prescribed by a physician. Zinc doses beyond that level put you at risk for symptoms like nausea, diarrhea, and abdominal cramping. Too much zinc can impair copper absorption in your body and it can even suppress your immune system.

Dietary sources of zinc include shellfish, cashews, grass-fed beef, pumpkin seeds, and legumes like beans, lentils, and chickpeas.

Consume Probiotic Foods

There's a tremendous number of immune cells residing in your gut. These cells form your gut-associated lymphoid tissue, or GALT, and represent about 70% of your immune system. So if the gut is not healthy, then the immune system can go awry and then inflammation can become a problem. When restoring or maintaining gut health, a key factor to address is the balance of "good bacteria" and "bad bacteria" in the gut.

Probiotics are the beneficial bacteria that make up the naturally occurring flora of the digestive tract. These "good bacteria" work to prevent invasion by harmful organisms, support the immune system, maintain the gut lining, and increase the absorption of various vitamins, minerals, and amino acids. When there is an overgrowth of "bad bacteria" in the gut, these bacteria produce substances that can increase inflammation throughout the body. Causes of this overgrowth can be stress, alcohol consumption, processed foods, and excess carbohydrate intake.

To restore or maintain the balance of "good" versus "bad" bacteria, you can consume probiotic foods. Look for fermented foods like kimchi, sauerkraut, green olives (that are salt water- brined), and kombucha. You can also eat prebiotics which are indigestible dietary fibers that nourish the "good bacteria" of the gut.

Examples of prebiotic foods:

- Onions
- Leeks

- Radishes
- Carrots
- Tomatoes
- Coconut meat
- Jicama
- Asparagus
- Yams
- Flaxseed
- [Chia seeds](#)
- Bananas
- Garlic
- Chicory root
- Dandelion greens
- Jerusalem artichoke

Great tip: [Dark chocolate](#) is a source of both prebiotics and probiotics. The recommendation is to limit dark chocolate to 3/4 ounce per day and to choose varieties that are at least 70% cacao content.

Note: If you have an immunodeficiency or are being treated for cancer, you should not take probiotics without consulting your physician.

Consider Herbal Foods And Supplements

While it may be tempting to find some “immune system boosters” to help your cause, boosting your immune system is not always the best course of action. There are times when your immune response needs to be stimulated and there are other times when it should be kept in check. There are certain foods and supplements, however, that can help get your immune system to a level where it is functioning as effectively as possible.

- **Adaptogens** are plants that have been used for centuries in Chinese and Ayurvedic medicine. Appropriately named for their ability to help our bodies adapt to stressors, adaptogens can support us through the strain of illness, work demands, or physical challenges.

To be considered an adaptogen, a plant must be non-toxic. It must have non-specific activity such that it “normalizes” bodily functions, regardless of the direction of change from the norm caused by the stressor. So it must be neither a stimulant nor a sedative. It should also enhance the general resistance of the body, decreasing the sensitivity to stressors.

Dr. Veronica explains, “Adaptogens really help lower stress level from an emotional standpoint and help your body cope from a [physical] standpoint, as

well as modulate your immune system.” Adaptogens she recommends for immune health include [rhodiola](#), [ashwaganda](#), [American ginseng](#) (*Panax quinquefolius*), and [Siberian ginseng](#) (eleuthero).

- [Melatonin](#) is a natural hormone created by the pineal gland in the brain. “Melatonin not only is an antioxidant and inhibits inflammation, says Dr. Kennard, “but it’s also been shown to reduce oxidative lung injury and inflammation in the setting of pulmonary disease.” For all of those reasons, given increased concern about viral respiratory infection in the wake of the COVID-19 pandemic, Dr. Kennard believes it would be prudent to consider a melatonin supplement.

Melatonin can also benefit you if you’re having trouble with sleep which is, as already described, an important factor for a strong immune system. Your body naturally produces melatonin as a signal for the body to prepare for sleep. When functioning normally, melatonin is released by the brain in response to a change in light. With less light entering through the eyes at night, more melatonin is produced.

Melatonin then travels through the bloodstream and cerebrospinal fluid (the fluid which surrounds the brain and spinal cord) to different areas of the body. When the hormone binds to the body’s melatonin receptors, it signals that the time for sleep has come, prompting the body to relax and lower its core temperature. This is how melatonin plays a role in the regulation of the body’s internal clock, also called the *circadian rhythm*.

Melatonin is not only affected by sunlight, but artificial sources of light as well. Even dim light exposure can suppress the usual production of melatonin at night. So light from a smartphone, television, or computer screen when used close to bedtime can reduce melatonin secretion, negatively affecting sleep.

Melatonin is available to supplement in tablet, capsule, gummy, powder, liquid, and lozenge forms. The suggested dosage for melatonin varies between individuals. Different factors, including body weight, metabolism, and general health, may affect the body’s response to melatonin.

For best results, take melatonin 30 to 60 minutes before bedtime. The National Sleep Foundation recommends an adult dose between 0.2mg and 5mg daily. The dose can be gradually increased as needed until adequate sleep is achieved. Consult with a health care provider before attempting to increase the dose above 5mg.

When starting a trial of melatonin, it's wise to begin with low dose and monitor for any ill effects. If morning grogginess becomes a problem, try decreasing the dose or taking it earlier.

Melatonin should also be accompanied by (and not used as a substitute for) healthy sleep practices which Dr. Kennard already described.

Being a natural chemical, melatonin appears to be generally safe for short-term use in most people. Even so, potential side effects of headache, dizziness, and daytime drowsiness should discourage use when driving.

As with any dietary supplement, however, people who take medications should talk to their health care providers before trying melatonin. It is possible for melatonin to cause harm by interacting with other drugs, perhaps reducing their effectiveness, triggering adverse side effects, or changing how the body metabolizes the drug.

Medical supervision is advised for melatonin supplementation in those who have epilepsy and those who take blood thinning medicine. Moreover, according to the 2015 guidelines of the American Academy of Sleep Medicine, melatonin use is not recommended for people with dementia.

- **Tumeric** contains curcumin, a compound which has been shown to reduce inflammation in the body. Dr. Kennard feels it is especially appropriate for use during cold and flu season. "It will reduce viral attachment, replication, and activation," she says, "and it also suppresses the key cytokines."

Cytokines are proteins released by the body which coordinate the immune response to infection. A cytokine storm is a complication when the immune response goes into overdrive. It can occur not only in COVID-19, but also other respiratory infections.

The curcumin content of turmeric is only about 3% by weight. So it is difficult to achieve effective anti-inflammatory levels simply by adding turmeric to food. Furthermore, curcumin is poorly absorbed in the bloodstream when consumed on its own. However, taking curcumin with piperine (a substance found in black pepper) greatly enhances its absorption.

As a dietary supplement, look for whole turmeric extract standardized for 95% curcuminoids. Standard dose is 500mg three times daily.

Before you make any dietary or physical activity changes, it's always wise to seek the counsel of your healthcare provider. Having the right team of health professionals and product suppliers is important to guide your path to optimal immune health.

The human body is a complex network of organ systems and hormonal pathways. If you've been feeling a little sluggish lately, or had some difficulty shedding excess fat, perhaps it's because your body is not optimized to function as it's supposed to! I'll make it simple for you. Let me show you the exact steps to take back control of your body to restore the health you've long desired.

Hope you'll join me in [Let's Get Real: 30-Day Total Body Reboot](#).

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