

## Viral Immune Support and Prevention Strategies

The immune system depends highly on the body's many other systems to function properly, and most infections occur in a weakened immune system. Specifically the **innate immune system** works to eradicate infections of all kinds immediately and on-sight - without any significant or prolonged symptoms that would indicate illness. In other words, your body fights it without you even knowing you are sick.

### How does the immune system fight viral infections, and how do we support a response?

While many things interfere with the immune system, such as environmental toxins, poor sleep, and overworking, the most important focus on prevention should be to promote a relaxed nervous system, entering the "rest, digest, and repair" mode of metabolism to keep the immune system at its strongest. The ability of the immune cells to **proliferate** (rapidly divide in response to infection) is affected by numerous variables including neuroendocrine signalling from the nervous system, nutrient levels which affect proliferation such as vitamin A or B12, and overall balance in the body such as thyroid, liver, and adrenal function. To operate at their highest efficiency, fast responding immune cells rely on a quick burst of energy generated by the **mitochondria**. If these so-called "power plants of the cell" are not functioning correctly the immune system fails to generate "reactive oxygen species" which are essential for quickly eradicating infectious organisms through an oxidative burst.

### It is now understood that the ability of immune cells to mobilize a response depends highly on the ability of the immune cells to manage and transfer energy through oxidation-reduction reactions.

The capacity of the immune cell to handle oxidative stress and more specifically transfer energy through chemistry is fundamental to every body system, and the immune system requires an especially high capacity for energy transfer. For this reason, many modalities of healing such as acupuncture, energy meditation, breathing meditations, exercise, outdoor time, sunshine and healthy emotional connection to loved ones arounds us together create a sense of safety and relaxed energy flow to the immune system.

Finally the **microbiome** of the body must not be overlooked in its pivotal importance in the immune system. The bacteria and other organisms must live in a state of harmony and balance in both the digestive tract as well as the lungs in order to contribute in stimulating the immune system into action. The innate immune system depends on the microbiome to remain functional in order to address infections before the organism needs to mount a strong immune response.

As a result repeated antibiotics often lead to recurring or chronic infections, indicating an immune deficiency. To correct the microbiome of the digestive tract often requires specific individual treatments, and many of the treatments for infection prevention in general are expected to improve digestion indirectly through influence on both the nervous and immune systems, as both of these systems maintain the microbiome. But as a general rule, a diet full of vegetables and fruits which are high in fiber should help.

What sorts of things can you do? (Specifics on the next page)

- Lifestyle: Vegetable-fiber rich diet, activity, sleep, mindfulness, intermittent fasting
- At-home treatments: Steam inhalation, essential oil diffuser, wet sock therapy, contrast hydrotherapy, castor oil hot packs, lung pack, full spectrum light therapy
- Nutrients and herbal medicines: vitamin A, C, D, lysine, glutamine, mushrooms, flucommune
- Probiotics: freeze-dried are most potently alive for long term support, non-active probiotics are potent stimulators for the immune system (article link in sources below for more information)
- Intravenous therapies: high dose vitamin C, hydration, mitochondrial, and neurochemical support

## Lifestyle

- **Outdoor activity** for at least 1 hour, 1-2 times per week
- **Sunshine** (without sun protection) for 20-60mins 1-2 times per week stimulates both production of vitamin D3 in the skin, but also triggers deeper rest and repair afterwards
- **Exercise** regularly for 1-2 hours 1-2 times per week, and avoid extreme activity which inhibits the immune system
- **“Grounding”** is a technique of keeping bare feet on the ground, which alone increases the electromagnetic energy/information in the body. This is enhanced by deep meditative breathing and movement to stimulate much more energy flow.
- **Sleep support** with a focus on sleep onset around 10pm as the 10pm-2am is the most crucial period of deep restorative sleep for most people. Full spectrum light therapy
- **Emotional connection** helps us to settle our nervous system and facilitate immunity.
- **Hygiene**: wash hands, clean surfaces, remain 6 feet distance from contact with known illness, warm and moist environments can reduce viral transmission.

## Nutrients

- **Vitamin D3** - loading dose: 50,000IU per day for 4 days (200,000IU total over 4 days); short-term high dose: 20,000IU per day for 2 weeks; maintenance: 5-10,000IU daily
- **Vitamin A** - loading dose: not during pregnancy - 100,000IU per day for 4 days (400,000IU total over 4 days); maintenance dose: 10,000IU daily
- **Zinc** - 15-30mg daily with food upto 4 weeks (longer may affect mineral balance)
- **Lysine** - 500-1,500mg twice daily gives fuel to the rapidly dividing immune cell
- **Vitamin C (ascorbic acid)** - 4,000-8,000mg twice daily as tolerated in digestive tract
- **Glutamine** - 2-5g twice daily to provide fuel for the immune cell proliferation and energy
- **Flucommune** by Ayush- 1 cap 1-3 times daily for a balanced energetic ayurvedic blend of herbs

## Steam diffuser during the day and night; essential oil steam inhalation when sick

- Thyme and eucalyptus are the most antiviral for the lungs.

**IV therapy, microbiome, and other naturopathic therapies** for prevention of infection are only reliably effective when tailored to the individual need, metabolism, environment, and past medical history.

DISCLAIMER: These suggestions in this document are to provide a backbone through which a treatment plan can be created with specific instructions for each patient. For more information or to schedule a consult please visit:

[www.ColibriWellnessCenter.com](http://www.ColibriWellnessCenter.com)

## SOURCES

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