

## Medicinal Plants: Improve Our Immunity

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### Introduction

During the flu season or times of illness, people often seek special foods or vitamin supplements that are believed to boost immunity. Vitamin C and foods like citrus fruits, chicken soup, and tea with honey are popular examples. Yet the design of our immune system is complex and influenced by an ideal balance of many factors, not just diet, and especially not by any one specific food or nutrient. However, a balanced diet consisting of a range of vitamins and minerals, combined with healthy lifestyle factors like adequate sleep and exercise and low stress, most effectively primes the body to fight infection and disease.

### What Is Our Immune System?

On a daily basis, we are constantly exposed to potentially harmful microbes of all sorts. Our immune system, a network of intricate stages and pathways in the body, protects us against these harmful microbes as well as certain diseases. It recognizes foreign invaders like bacteria, viruses, and parasites and takes immediate action. Humans possess two types of immunity: innate and adaptive.

Innate immunity is a first-line defense from pathogens that try to enter our bodies, achieved through protective barriers. These barriers include:

- Skin that keeps out the majority of pathogens
- Mucus that traps pathogens
- Stomach acid that destroys pathogens
- Enzymes in our sweat and tears that help create anti-bacterial compounds
- Immune system cells that attack all foreign cells entering the body

**Adaptive or acquired immunity:** - is a system that learns to recognize a pathogen. It is regulated by cells and organs in our body like the spleen, thymus, bone marrow, and lymph nodes. When a foreign substance enters the body, these cells and organs create antibodies and lead to multiplication of immune cells (including different types of white blood cells) that are

specific to that harmful substance and attack and destroy it. Our immune system then adapts by remembering the foreign substance so that if it enters again, these antibodies and cells are even more efficient and quick to destroy it.

**Other conditions that trigger an immune response:** - Antigens are substances that the body labels as foreign and harmful, which trigger immune cell activity. Allergens are one type of antigen and include grass pollen, dust, food components, or pet hair. Antigens can cause a hyper-reactive response in which too many white cells are released. People's sensitivity to antigens varies widely. For example, an allergy to mold triggers symptoms of wheezing and coughing in a sensitive individual but does not trigger a reaction in other people.

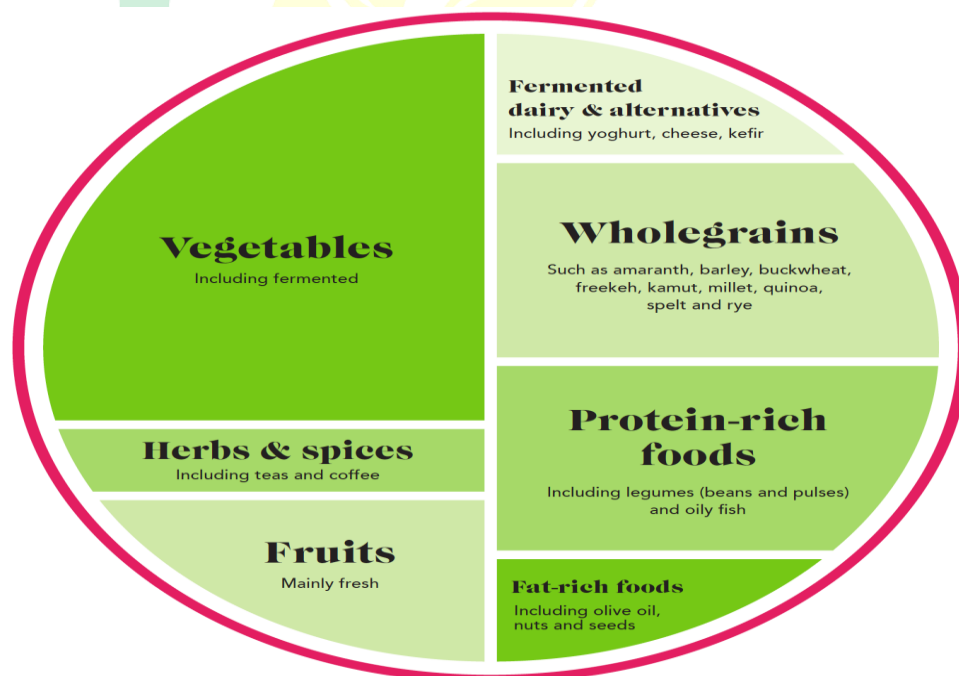
Inflammation is an important, normal step in the body's innate immune response. When pathogens attack healthy cells and tissue, a type of immune cell called mast cells counterattack and release proteins called histamines, which cause inflammation. Inflammation may generate pain, swelling, and a release of fluids to help flush out the pathogens. The histamines also send signals to discharge even more white blood cells to fight pathogens. However, prolonged inflammation can lead to tissue damage and may overwhelm the immune system.

Autoimmune disorders like lupus, rheumatoid arthritis, or type 1 diabetes are partly hereditary and cause hypersensitivity in which immune cells attack and destroy healthy cells. Immunodeficiency disorders can depress or completely disable the immune system, and may be genetic or acquired. Acquired forms are more common and include AIDS and cancers like leukemia and multiple myeloma. In these cases, the body's defenses are so reduced that a person becomes highly susceptible to illness from invading pathogens or antigens.

#### **What factors can depress our immune system?**

- Older age: As we age, our internal organs may become less efficient; immune-related organs like the thymus or bone marrow produce less immune cells needed to fight off infections. Aging is sometimes associated with micronutrient deficiencies, which may worsen a declining immune function.
- Environmental toxins (smoke and other particles contributing to air pollution, excessive alcohol): These substances can impair or suppress the normal activity of immune cells.

- **Excess weight:** Obesity is associated with low-grade chronic inflammation. Fat tissue produces adipocytokines that can promote inflammatory processes. [1] Research is early, but obesity has also been identified as an independent risk factor for the influenza virus, possibly due to the impaired function of T-cells, a type of white blood cell. [2]
- **Poor diet:** Malnutrition or a diet lacking in one or more nutrients can impair the production and activity of immune cells and antibodies.
- **Chronic diseases:** Autoimmune and immunodeficiency disorders attack and potentially disable immune cells.
- **Chronic mental stress:** Stress releases hormones like cortisol that suppresses inflammation (inflammation is initially needed to activate immune cells) and the action of white blood cells.
- **Lack of sleep and rest:** Sleep is a time of restoration for the body, during which a type of cytokine is released that fights infection; too little sleep lowers the amount of these cytokines and other immune cells.



Wondering how to boost your immunity against COVID-19? Well as you know, a strong immune system could be the perfect solution to tackle COVID-19! The world is in great depression due to the massive spread of novel corona virus i.e., SARS –CoV-2 and its variants, which have affected majority of the countries. Persons with weak immune system are found to be the easy targets

of the covid -19 disease including old age persons, children and patients with pre-existing clinical history like diabetes, cancer, respiratory disorders etc. Here are a few herbs that will help your body produce more immunity. Make a point to consume one or more of the following every day -

- 1. Moringa-** Moringa is a herb that can help ward off many health complications. And during the COVID-19 pandemic, it should be your go-to herb for immunity strengthening. So what makes moringa such a powerful immunity booster? The Vitamin C content of moringa is more than that of oranges. Vitamin C is one of the chief nutrients that our bodies need towards building a strong immunity. That's not all, moringa also contains some other vital nutrients that strengthen your cells, muscles, tissues and help your body heal. Consume moringa for its high levels of potassium, iron, calcium and amino acids.
- 2. Neem-** Since time immemorial, neem has been respected and widely used as an immunity booster. It is very effective in keeping the body safe from attacks by harmful pathogens, thanks to its anti-viral, anti-bacterial and anti-fungal properties. Neem can also keep your blood clean. It purifies the blood by flushing away toxins and this can strengthen immunity.



- 3. Tulsi-** Tulsi is another wonder herb that is much favoured by Ayurveda. Tulsi or basil is a powerful germicide. Because of its phytochemicals and antioxidants, it can help locate germs, viruses and bacteria the moment they enter your body and destroy them. Simply chew a few leaves first thing in the morning. You can also add a few drops of water boiled with tulsi leaves into your food.
- 4. Ashwagandha-** Ashwagandha is an adaptogen, which means it can decrease stress levels. Stress lowers your immune response and makes the body vulnerable to viral

infections. Consume ashwagandha during this pandemic which helps reduce the risk of contracting the coronavirus infection. It is also reported/claimed that “Aswagandha could be the top.

5. **Triphala-** Triphala contains the antioxidative properties of three fruits- haritaki, bibhitaki and amla. It is loaded with Vitamin C and Vitamin A- both of which strengthen your immunity. Start your day with Triphala.
6. **Ginger-** Ginger has been an age-old remedy for flu and the common cold. It may help against viruses like COVID-19. It contains gingerol – an antioxidant that can power up our immune system and kill viruses. Ginger is particularly good in preventing respiratory tract infections. Add ginger to your meals or you can also have it raw.



7. **Garlic-** Just like ginger, garlic too may help you stay protected from coronavirus by stimulating your immunity. It contains allicin- a plant compound that acts as a germicide. But remember, to make the most of the benefits of garlic, consume it raw or partially cooked.
8. **Turmeric-** Every time your grandmother said you need to consume turmeric for your health, she was right. Turmeric contains curcumin– a phytochemical that can help remove toxins from your body and strengthen your immune system to fight off germs and bacteria. Add an extra dash of turmeric to your meals or consume it with milk.
9. **Black cumin-** Black cumin extracts can help you keep safe from a range of viruses and bacteria that attack your immune system. Both black cumin seeds and oil act as antioxidants and help flush out free radicals that weaken your immunity. Another great alternative to build a strong immune system is the Ever herb Immunity Boosters! The



things you need to improve your immunity are all within your reach. Consume these and stay home to help beat corona virus.

