

## Headline:

### Diet or supplements? What's the best path to immune health?

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Rigr Centrum blog

9/18/20

Inflamed skin. Fever. Sneezing. Coughing. Elevated pulse. Body aches.

We say we have an infection when we experience these symptoms. But technically speaking, these are not signs of the infection itself, but the inflammatory responses of your immune system fighting an infection. Without these responses you wouldn't be long for this world.

The human immune system is an incredibly complex organ which science is only beginning to unravel. The "system" which helps us defend against bacteria, viruses, fungi, parasites, and other invaders, is an interdependent web of gut microbes, white blood cells, antibodies, bone marrow, and organs including the lymphatic system, the spleen, and the thymus, all working together to fight everything from the common cold to serious illnesses.

The immune system has an amazing ability to constantly scan our bodies and determine what should and should not be there and if it poses a threat to our health. If the immune system identifies certain cells as unwanted, it rallies its inflammatory responses, surrounding the "invader" in an attempt to remove it from your body. It also has the ability to "remember" an unwelcome microbe from years ago to rally its inflammatory responses faster. Collectively, a healthy immune system is essential for normal growth and development and maximized longevity. [1] It's no wonder then that so many of us look for ways to "boost" our immune system in the quest for having a perpetually clean bill of health.

But assuming you're relatively healthy, there's no magic, off the shelf product that will boost your immunity all on its own. And if there was, that might be a bad thing, because an overactive immune system is counterproductive: it leads to a host of autoimmune disorders, and can be just as detrimental to your health as an immune system that is not up to par. The goal is balance, which you can achieve through diet and lifestyle modifications and if needed, vitamin supplementation.

#### What Dr. Fauci and other medical experts recommend for maintaining your immune health

Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases calls out most "immune boosting" herbs and supplements as having no effect whatsoever. He states that the answer is simpler:

"If you are deficient in Vitamin D, that does have an impact on your susceptibility to infection. So I would not mind recommending, and I do it myself, taking Vitamin D supplements." Dr. Fauci goes on to say that vitamin C is a good antioxidant, "so if people want to take a gram or two at the most [of] vitamin C, that would be fine." [3]

Fauci adds that the 3 best ways to maintain your immune system are to get a reasonable amount of sleep, 7-8 hours a night; eat a balanced diet with whole foods and plenty of fruits and vegetables; and “try to avoid or alleviate severe stress which we know can sometimes impact the immune system.” [4]

And there is research on Vitamin C and vitamin D to back up Dr. Fauci’s statements.

According to the National Institutes of Health, “Vitamin C deficiency results in impaired immunity and higher susceptibility to infections... supplementation with vitamin C appears to be able to both prevent and treat respiratory and systemic infections.” [5]

The necessity of vitamin D in immune health – especially D3 which the body produces in response to our skin cells receiving UVB rays (sunlight) - is well documented. Health professionals recommend we spend at least 20 minutes outdoors each day so our bodies produce a sufficient quantity of D3 (those with dark skin need additional time). But our geography, not to mention our sedentary lifestyles, can make that difficult. For instance, those who live in northern latitudes may find it difficult to spend time outdoors in winter. For those individuals who can’t spend sufficient time outdoors, Vitamin D supplements are recommended.

Remarkable new research shows how imperative Vitamin D is in protecting the body from respiratory infections. On September 8, 2020, researchers at the University of Chicago Medicine announced they had found an association between Vitamin D deficiency and the likelihood of becoming infected with Coronavirus.

David Meltzer, lead author of the study and Chief of Hospital Medicine at UChicago Medicine, said, “Vitamin D is important to the function of the immune system and vitamin D supplements have previously been shown to lower the risk of viral respiratory tract infections. Our statistical analysis suggests this may be true for the COVID-19 infection.”[2]

### **How to keep your immune system in balance**

According to Dr. Len Calabrese, Professor of Medicine at the Cleveland Clinic Lerner College of Medicine and the director of the R.J. Fasenmyer Center for Clinical Immunology, one of the best things you can do to maintain a healthy immune system is to adopt a Mediterranean-style diet and take a fish oil supplement. The guiding principles of a Mediterranean-style diet are:

- Minimally processed, seasonally fresh, and locally grown foods
- Olive oil as the principal source of dietary fats
- Abundant plant-based foods (fruits, vegetables, beans, nuts, seeds)
- Dairy products (mainly cheese and yogurt) in low to moderate amounts
- Four eggs or less per week
- Red meat in low frequency and small amounts

“The basic principles are a) reducing the content of meat and dairy as they contain proinflammatory fats (saturated, trans and partially hydrogenated oils) and b) increase sources of Omega-3 fatty acids in the diet which include flax seeds, cold water fish (salmon, herring, sardines and bluefish) and fish oil supplements (1-2 grams per day).” [1]

Tami J. Mackle, Rigr Centrum’s Registered Nutritionist, agrees with Drs. Fauci and Calabrese:

“Simple ways to support your immune health are to include foods and/or supplements that contain key immune supporting nutrients: Vitamin C, Vitamin A, Vitamin E, zinc, and Vitamin D. Vitamin D plays an especially crucial role in maintaining a functioning immune system.

Vitamins C, A, E and zinc are all known antioxidants, which are substances that may prevent or delay some types of cell damage. Foods that contain antioxidants include citrus fruits, red, orange, and yellow vegetables, leafy greens, whole grains, fish like salmon, and dairy products. All are rich sources of these vitamins and the basics for a healthy diet.”

[1] Maintaining a healthy immune system: what you can do to help. Dr Calabrese.

[file:///C:/Users/th204665/Desktop/RJF\\_Booklet\\_immune%20system.pdf](file:///C:/Users/th204665/Desktop/RJF_Booklet_immune%20system.pdf)

[2] UChicago News, Vitamin D deficiency May Raise Risk of getting COVID-19, study finds

<https://news.uchicago.edu/story/vitamin-d-deficiency-may-raise-risk-getting-covid-19-study-finds>

[3] CNBC, The supplement Dr. Fauci takes to help keep his immune system healthy:

<https://www.cnbc.com/2020/09/14/supplements-white-house-advisor-fauci-takes-every-day-to-help-keep-his-immune-system-healthy.html>

[4] MSN.com, Fauci says the 3 best things to keep your immune system working optimally cost nothing

<https://www.msn.com/en-in/health/fitness/forget-vitamins-fauci-says-the-3-best-things-to-keep-your-immune-system-working-optimally-cost-nothing/ar-BB199IL9?li=AAggbRN>

[5] National Institutes of Health, Vitamin C and Immune Function

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5707683/>