

January 2022 Newsletter

Hello, this is Dr. Ellen. As the new year begins, I am very excited to let everyone know about launching my new revised website, www.drellencutler.com. After my years in practice, I have discovered many wonderfully effective ways in which people can maximize their health, beauty, and wellness. Now, I am looking forward to sharing these discoveries with everyone. These include ways to improve the physical, mental, emotional, and spiritual aspects of your life.

Once a month, I will be publishing my newsletter. Each month will focus on a different facet of health. In this inaugural newsletter, I am focusing on the immune system. With the holiday season behind us and the colder weather and “flu season” continuing, I want to address ways in which you can optimize your immune functions.

The Immune System

The immune system helps protect your body from foreign and potentially hazardous intruders, including microorganisms (such as bacteria and viruses), transplanted tissues, and even cancer cells. There are two main branches of this defense system.

1. You are born with an ‘innate system’, which is composed primarily of white blood cells called phagocytes (literally meaning “devouring cells”) such as neutrophils, macrophages, and natural killer cells (aka NK cells) that engulf and destroy the invaders. There are also cells that secrete substances which cause an inflammatory response, thereby activating the body’s defenses.
2. The ‘adaptive system’ works with the innate system and responds shortly after exposure to a specific foreign invader, or to a specific intruder remembered from a previous exposure. There are two main ways these white blood cells neutralize specific invaders. B-cells (aka B-lymphocytes) produce antibodies that are released into the blood stream to attack a specific intruder. The others are called T-cells (aka T-lymphocytes), which ingest the specific invader, breaking it into small pieces.

A healthy immune system is essential in maintaining optimal health. You need the immune system functioning at its best year-round, not just through the winter months.

[If you would like more details about the immune system, visit “Overview of the Immune System” at <https://www.merckmanuals.com/home/immune-disorders/biology-of-the-immune-system/overview-of-the-immune-system>]

Now, after more than a month of holiday eating, it’s time to make sure your eating habits are in your best interest, both in general and specifically for your immune system. Perhaps the most important thing to check is your intake of processed sugars. These are found in almost all the

prepared 'sweets' that we have eaten during the holiday season. And they are one of the primary suppressors of proper immune function.

Studies have shown that spikes in sugar intake suppress your immune system.^[1,2] We also know that sugar itself can cause low-grade inflammation in the body.^[3] Further, eating a diet high in sugar and fat may cause damage to the immune cells in the gut that help keep inflammation, and thus infection, in check.^[4] Therefore, the best sweets are those provided directly from nature, primarily fresh fruits, such as apples and berries. The next best are frozen fruits. These contain all the fruit's fiber and nutrients, allowing the naturally occurring sugars to be optimally digested and utilized by the body.

Being physically active is well known to increase our overall health and sense of wellbeing. Exercise can help improve the functioning of the immune system by increasing the activity of immune cells that help fight pathogens and by decreasing inflammation in the body. Exercise can also help slow the aging of the immune system. Physical activity in general can help flush out bacteria from the airways and lungs and can cause changes in antibodies and immune cells, both of which help fight infections.^[5]

In my experience, exercising on a regular basis is one of the most important factors in supporting the immune system. If possible, do both cardio and strength training. Of course, the best exercises to do are those you are willing to do regularly. If a particular exercise is new, feel free to start by underestimating the amount and/or intensity of that exercise. You may want to challenge yourself with exercises; again, begin with a smaller challenge and gradually increase it over time. Remember, as you increase intensity, frequency, and duration, the amount of time for recovery usually increases as well.^[5] Also, please check with your primary health care provider to determine if the exercises you would like to do are appropriate for you.

At least some of your exercises to help optimize the functioning of your immune system need not be a strength or endurance challenge. For example, in one study, a 12-week program of regular Tai Chi exercises enhanced functional mobility, personal health expectations, and T cell function.^[6] In another study, Tai Chi was found to not only make those participating feel healthier but also found increased levels of 'memory' T-cells that specifically recognize and attack a specific virus (in this case, the varicella virus that causes chicken pox and shingles).^[7]

We know that living a healthy lifestyle to optimize your immune system includes proper nutrition and exercise. The functioning of the immune system can also be improved by mental and emotional factors. I have found that a positive mindset can positively influence one's sense of wellbeing. You can allow yourself to have a sense of wellness, a knowing that you are healthy, and then write down those positive feelings and read them regularly. Such positive affirmations can help you live in a healthy state of mind. They can help you get your mind 'out of your own way' and toward a healthful life.

A number of studies have found that negative emotions can weaken the immune response. On the other hand, some researchers have found those who have a more positive outlook have less inflammatory damage that would otherwise result from stress. Some also feel that positivity as well as hope can lead people to make better life decisions and increase the benefits of longer-term strategies, resulting in better health.^[8]

A continual negative reaction toward a persistent unwanted or stressful situation may be a negative factor in your immune response. Studies have found that chronic stress can lead to suppression of many parts of the immune system. For example, those who feel that their lives are 'stressful' or tend to have negative thoughts and a negative mindset can have a significant decrease in natural killer (NK) cells, which can target and eliminate virus-infected cells. Since nearly all non-physically threatening stress is internally generated, you can have a great deal of control over what your immune system hears.^[9]

A particularly uncomfortable circumstance that has gained further attention of late is loneliness. This can also be seen as an ongoing stressful situation. Researchers looked at the white blood cells of people identified as chronically lonely and compared them with individuals who reported having great social support. A large proportion of the genes that were 'turned on' in the white blood cells of those identified as 'lonely' were involved in the inflammatory response and many of the downregulated genes were involved in antiviral functions. In sociable people, the reverse was observed. It was a small study, but the findings were reproduced with a larger group of subjects.^[10]

Researchers have shown that mind-body medicine approaches can achieve calming stress reduction. These can help improve immune function and have anti-inflammatory effects. However, persistence and perseverance are required to achieve these results. There are mind-body approaches that are body-centered practices such as Tai Chi (see above) and yoga. At the other end of the spectrum, there are mindful practices such as breath awareness training or formal mindfulness meditation.^[11] All approaches have many different practice types, but there is overlap in many of the various practices.

Several studies have been done to look at the changes in genetic regulation resulting from meditation. Studies involving groups of stressed caregivers and lonely adults found that courses in meditation and mindfulness-based stress reduction, respectively, shifted gene expression in their white blood cells away from inflammatory genes and towards antiviral genes.^[10] In a review of randomized controlled trials addressing the effects of mindfulness meditation on the immune system, several parameters were found to help increase immune function.^[12]

Supplements

In my years of clinical experience, I have used a number of supplements to help strengthen immune function and balance. I want to share with you some of those I have recommended most often.

“Sugar/Starch DigestEnz” or **“Chewable DigestEnz”** by Proenzol – I have found the use of digestive enzymes to be foundational to healthy immune function. Digestive enzymes help optimize the breakdown, absorption, and utilization of the nutrients in our foods. The resulting macro- and micronutrients are necessary for the healthy functioning of all cells in the body, and especially the cells of the immune system. All Proenzol products are non-GMO, vegan, and contain no gluten, sugar, soy, or wheat.

“ImmunEnz” by Proenzol –

This is a supplement that contains a proprietary herbal extract blend along with a blend of proteases that help break down proteins into smaller peptides and amino acids. The herbs used are well known to help support immune function and include astragalus, the two main species of echinacea, reishi and shiitaki mushrooms, and bupleurum. These work synergistically along with the proteases to help optimize the function of the immune system. I have often used this in combination with Proenzol’s “Nose & Throat”.

“Nose & Throat” by Proenzol -

This supplement is a combination of several ingredients designed specially to support the mucosa of the nose and throat. Vitamin C and zinc citrate are combined with a number of herbal extracts and quercetin as well as enzymes that break down sugars (amylase), proteins (proteases), and peptides (serrapetidase). I have seen this formula appear to help decrease or enhance recovery from cold and flu symptoms.

Liposomal Vitamin C -

Vitamin C appears to have several beneficial effects on both the innate and adaptive immune system. For example, vitamin C enhances neutrophil movement to the site of infection and the engulfing and killing of the microorganisms there. It appears to be especially helpful in respiratory and systemic infections by enhancing various immune cell functions. Vitamin C deficiency remains relatively common in the Western world. This is largely because of insufficient consumption of vitamin C containing foods in addition to environmental pollutants and chronic inflammatory diseases.^[13]

In my experience, daily supplementation with vitamin C by mouth is limited by difficulties with absorption through the intestinal lining. However, in a liposomal form, the liposomes can attach to the cells of the intestinal membrane and enhance the absorption of the vitamin C into the bloodstream. This also decreases the chance of any adverse effects, such as stomach upset.^[14]

Vitamin D -

Vitamin D2 is produced by plants. Vitamin D3 is produced by animals. It is generally assumed that vitamin D3 is more potent than the D2 form, although some studies have suggested that D2 is similar to D3 in its ability to boost the biologically active form of the vitamin.^[15] However,

in my experience, vitamin D3 appears to be the better absorbed and the preferred supplement of the two.

Studies have revealed important interactions between vitamin D and cells from both the innate and adaptive immune system. Immune cells create enzymes that metabolize vitamin D and have vitamin D receptors. Thus, vitamin D appears to be essential for normal immune function. Insufficient vitamin D levels may lead to dysregulation of immune responses.^[16]

Elderberry -

The berries and flowers of elder have large amounts of antioxidants and vitamins. Possibly because of their phytonutrients, I have found that they can boost your immune response. There have been clinical studies with elderberries. They appear to help reduce cold duration and severity (fever, pain, congestion, cough).^[17] I have often recommended it at the onset of an upper respiratory infection and seen favorable results.

“Humacel Immune Support” by Perfect Solutions LLC. -

It has been my experience that this product can help greatly in supporting the immune system, especially in its response to several viruses. I have often used this product in combination with others described here with great success. It contains a proprietary formulation of ‘phenol complex’ and β -1,3/1,6-glucans (β meaning ‘Beta’). The phenol complex is made by the extracts humic and fulvic acids, also found in the ayurvedic supplement ‘shilajit’. These have supportive effects on especially the adaptive immune system.^[18]

The other main ingredient is β -1,3/1,6 Glucans. A review article published in 2020 suggested that there is evidence that β -1,3/1,6-glucan supplementation can elicit immune-enhancing effects.^[19] Also, there seems to be an added benefit when compounds such as humic and fulvic acids are combined with the β -1,3/1,6 Glucans.^[18]

CXVIVI Virox by Systemic Formulas, Inc. -

This is a combination tincture that I have used with great success over the years. CXVIVI Virox contains two immune supportive agents: native American *Lomatium dissectum* (*Leptotaenia*) and native Brazilian rain forest Pau D’Arco. This formula helps support normal immune ‘preparedness’. This includes supporting the healthy spectrum of bacteria of the microbiome, which is itself important in the optimal functioning of the immune system.^[20]

CoQ 10, PQQ, R-Lipoic Acid –

These are phytonutrients that enhance mitochondrial function. The mitochondria are the powerhouses of each and every cell in the body, helping convert the energy in food into cellular biochemical energy. Naturally, optimizing the energy available to cells of the immune system, which are highly energy-dependent, helps them function optimally. There are 3 supplements in particular that I have recommended with great regularity to optimize mitochondrial function:

- Coenzyme Q 10 [**CoQ 10**] [aka Ubiquinol], which can also boost physical performance.^[21]
- Pyrroloquinoline quinone [**PQQ**], which alters indicators of inflammation.^[22]

- ***R-Lipoic Acid***, the most active form of alpha-lipoic acid, which is both water and fat soluble.^[23]
-

In closing, you can see there are many ways in which relatively simple changes can lead to improved functioning of your immune system. Better dietary habits and healthy and regular exercise and other activities themselves can be greatly helpful. Adding in daily routines such as mindfulness meditation or Tai Chi and achieving a positive mindset can also bolster your immune function. And supplementation with phytonutrients can be seen as just that, supplementing your improving lifestyle. They may also be useful during certain stressful times, such as in the colder months or during emotionally stressful periods, to help supplement your immune system.

In my next newsletter, I will focus on the topic of body weight. I want to address the issues of weight and weight loss, and the role of diet, efficient digestion, and intermittent fasting.

By the way, in the near future, I am going to resume teaching ECM to healthcare practitioners. If you are a healthcare practitioner or know of one interested in my work, please contact Cynthia at cynthia@drellencutler.com.

Be well, be healthy, and remember...

“An ounce of prevention is worth a pound of cure.”

- Benjamin Franklin (1736)

Dr. Ellen

References:

1. “Doctors warn that sugar can temporarily weaken your immune system” at <https://www.cnet.com/health/nutrition/sugar-can-lower-your-immune-system/>
2. “Foods and drinks that compromise your immune system” at <https://www.piedmont.org/living-better/foods-and-drinks-that-compromise-your-immune-system>

3. "Eating sugar can weaken your immune system" at <https://www.huffpost.com/entry/sugar-weaken-immune-system | 5e74ca2cc5b6f5b7c542a3be>
4. "Western diet may increase risk of gut inflammation, infection" at <https://medicine.wustl.edu/news/western-diet-may-increase-risk-of-gut-inflammation-infection/>
5. "5 Strategies for Strengthening Your Immune System With Exercise" at <https://health.usnews.com/wellness/fitness/articles/strategies-for-strengthening-your-immune-system-with-exercise>
6. "Regular tai chi chuan exercise enhances functional mobility and CD4CD25 regulatory T cells" at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2491999/>
7. "Tai-Chi boosts immunity: study" at <https://www.abc.net.au/science/articles/2003/09/25/952853.htm>
8. "The Power of Positive Thinking" at <https://www.hopkinsmedicine.org/health/wellness-and-prevention/the-power-of-positive-thinking>
9. "3 Scientific Studies That Prove the Power of Positive Thinking" at <https://medium.com/swlh/3-scientific-studies-that-prove-the-power-of-positive-thinking-616477838555>
10. "Immunology: The pursuit of happiness" at <https://www.nature.com/articles/503458a>
11. "How Mindfulness Training Can Boost Your Immune System" at <https://health.clevelandclinic.org/how-mindfulness-training-can-help-you-achieve-immunologic-health/>
12. "Mindfulness meditation and the immune system: a systematic review of randomized controlled trials" at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4940234/>
13. "Vitamin C and Immune Function" by Anitra C. Carr and Silvia Maggini *Nutrients* 2017, 9, 1211 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5707683/>
14. "Liposomal Vitamin C: Why Doctors Recommend It For Immune Health" at <https://www.mindbodygreen.com/articles/liposomal-vitamin-c>
15. "How Mushrooms Become High in Vitamin D" at <https://www.montereymushrooms.com/blog/how-mushrooms-become-high-in-vitamin-d>
16. "Vitamin D and Immune Function" at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3738984/>
17. "*Sambucus nigra* (black elder) as alternative treatment for cold and flu" at <https://link.springer.com/article/10.1007/s13596-020-00469-z>
18. "Glucan and Humic Acid: Synergistic Effects on the Immune System" at https://www.researchgate.net/profile/Vaclav-Vetvicka/publication/44678111_Glucan_and_Humic_Acid_Synergistic_Effects_on_the_Immune_System/links/0fcfd50c74c5b66f82000000/Glucan-and-Humic-Acid-Synergistic-Effects-on-the-Immune-System.pdf
19. " β -1,3/1,6-Glucans and Immunity: State of the Art and Future Directions" at https://www.researchgate.net/publication/340023552_b-1316-Glucans_and_Immunity_State_of_the_Art_and_Future_Directions

20. "CXVIVI Virox" at <https://systemicformulas.com/wp-content/uploads/2021/03/488-VIVI-Mar-29-2021.pdf>
21. "Effects of acute and 14-day coenzyme Q10 supplementation on exercise performance in both trained and untrained individuals" at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2315638/>
22. "Dietary pyrroloquinoline quinone (PQQ) alters indicators of inflammation and mitochondrial-related metabolism in human subjects" at <https://pubmed.ncbi.nlm.nih.gov/24231099/>
23. "The Effect of Alpha-Lipoic Acid on Mitochondrial Superoxide and Glucocorticoid-Induced Hypertension" at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3600316/>