The Holistic Truth

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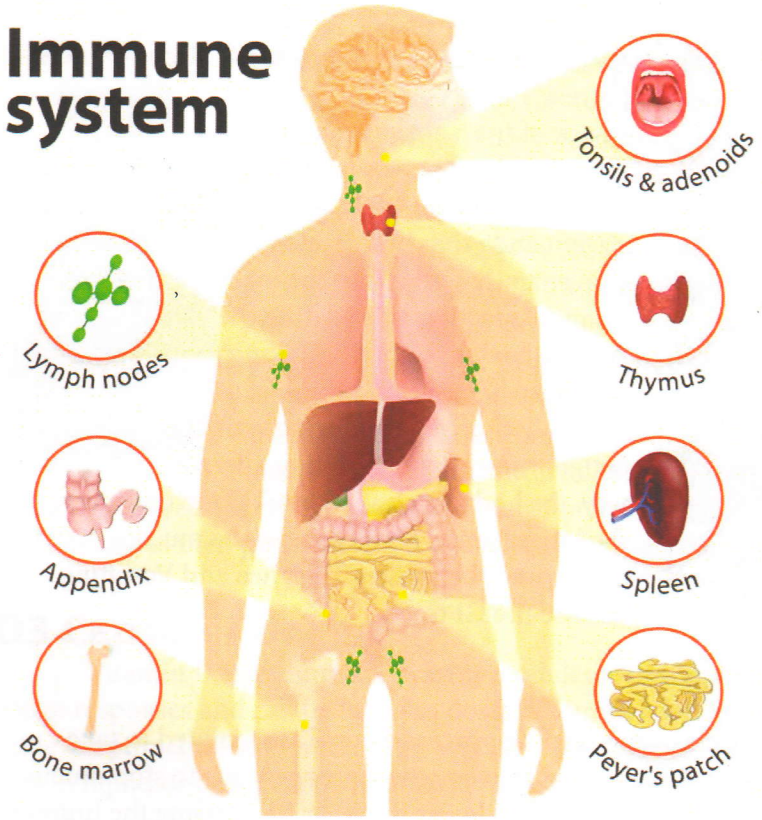


Just in Time for Winter Newsletter: The Immune System

What is the immune system? In simple terms, the immune system is a group of cells, bio-chemicals, tissues and organs strategically located throughout the body to help protect against bacteria, viruses, fungi, yeast, & parasites. The immune system is one of our keys to optimal health! It's an important first line of defense against everything from the common cold to life-threatening diseases such as cancer.

The immune system can be categorized into 2 major divisions: innate and adaptive immunity. Innate immunity refers to the physical and chemical barriers that prevent pathogenic microorganisms from entering body. The skin, for example, provides a barrier of acidic pH, salty sweat, and fatty acid secretions of the sebaceous glands to prevent microbial invasion. Innate immunity also includes the mucous linings of the digestive and respiratory tract, the tonsils and adenoids, the enzymes & flora in our intestines, the acidic pH of the stomach, and more.

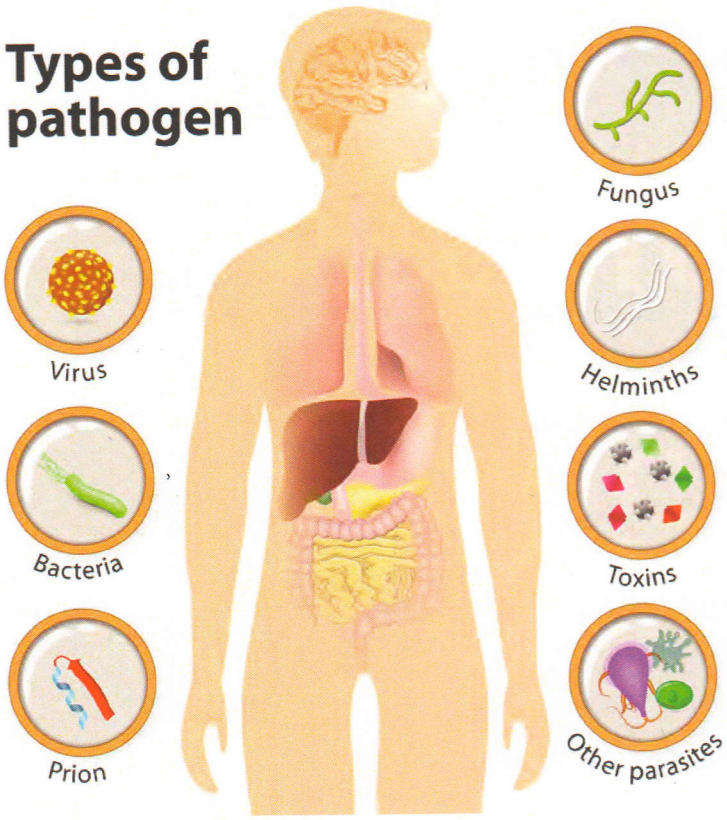
Acquired or Adaptive Immunity includes our B and T lymphocytes, which are types of white blood cells. B cells produce antibodies (immunoglobulins) directly in response to contact with pathogens (pathogen = disease-causing organism). T cells are associated with cell-mediated immunity and work in close conjunction with B cells.

5 Organs of Elimination

The 5 organs of elimination also play an important role in the functioning of a healthy immune system and overall optimal health. The skin, lungs, kidneys, GI Tract, and liver comprise the organs of elimination, which assist in the removal of toxins from the body. The skin excretes toxins through sweat and pores; the lungs excrete toxins through respiration; the kidneys through urination; the GI tract through bowel movements; and the liver neutralizes and eliminates toxic compounds as part of the digestive tract and ALSO helps metabolize and neutralize toxins and other substances through phase I and phase II detoxification. Over time, with continued exposure to stressors, pollutants, chemicals, processed foods, & poor air and water, these organs become overworked and subject to oxidative stress. As part of having a healthy immune system, we need to ensure that the organs of elimination are functioning at their best.

Origin of Acute Illness?

What is the etiology of acute infection with colds and flu? One lens through which to view acute illness is as a 'cleansing process.' Over time, a typical person becomes "toxic"- in other words, the burden of dealing with a variety of physical, chemical, and emotional stressors results in the body becoming less efficient at handling infection. This is caused by a number of contributing factors, for example:



- Poor diet- with nutrient deficiencies & damage due to food that is processed and contains chemical additives, preservatives, and pesticides
- Overexposure (both frequency/quantity) to environmental contaminants
- Lack of sleep
- Disharmonious responses to life circumstances ("stress")
- Lack of fresh air, sun, and exercise

This toxic load begins to interfere with proper functioning of the body which weakens the immune system and other body systems. A microorganism conveniently settles into the toxemia, creating an immune reaction, stimulating the vital force (our "innate healing ability"). The microbial infection triggers what we could think of as a cleansing. The body "discharges", producing symptoms such as cough, runny nose, vomiting, diarrhea, etc. In this way, the body is "cleaned out:" Coughing cleanses the lungs, runny nose cleanses the mucous membranes and the sinuses, diarrhea and Vomiting cleanse the GI tract.

Suppressive Treatments

Unfortunately, we typically interfere with the cleansing/healing process. People are tempted to take over-the-counter (OTC) meds to stop the cleansing: Antitussives to stop coughs, decongestants to stop mucus production, anti-diarrheals to stop cleansing of the GI tract, NSAIDs to lower the fever (decreasing the immune response), and so on. In all the ways the body wishes to excrete the toxins, people stop that from happening so we can move on with our regular lives!

Ideally we would honor the reactions of the vital force to the infection: the lack of appetite, fatigue and achiness serve the purpose of making the body rest so that all of our energy can be directed to the cleansing and healing process. Instead we continue eating the Standard American Diet, keep working, keep cleaning the house--keep expending energy the body needs to detoxify and heal. We have this mentality that we need to fight the bug. It is more productive & accurate to think of the bug as a stimulating agent of health.

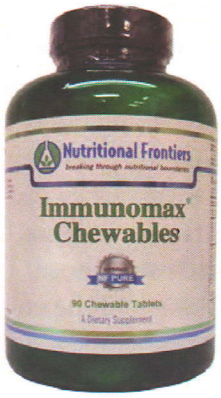
Prevention

A healthy diet and lifestyle is the best way to maintain a strong, vibrant immune system. This includes getting enough rest- 8 hours a night is best, on average. Regular moderate physical activity has beneficial effects on the immune system, such as reducing the risk of upper respiratory infection. Stress management is key, as stress is a highly modifiable risk factor that impacts the immune system. Yoga, tai chi, meditation, biofeedback, hobbies, cultivating a rich spiritual and social life, breathing exercises, and other relaxation techniques are examples of ways to modulate the stress response. Dietary modifications can improve general immune function, such as drinking 6-8 glasses of filtered water and eating 5-9 servings of produce per day. The most important diet change you can make to support the immune system is to reduce sugar intake! Sugar interferes with white blood cells' ability to destroy bacteria.

During acute illness, it's best to eat lightly and to minimize intake of heavy, fried, and junk foods along with increasing intake of homemade soups (veggie and/or chicken), herbal teas, and water. Garlic, onion, horseradish, ginger, shiitake and wild mushrooms, and cayenne pepper are especially helpful to eat ingest during a cold or flu.

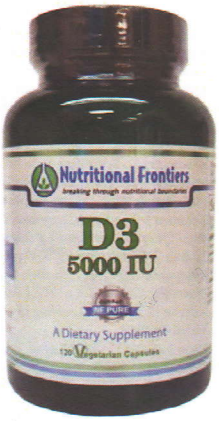
Interventions from Nutritional Frontiers

Nutritional Frontiers offers several nutritional supplements whose ingredients may provide immune system support either for prevention or during acute illness to help shorten the duration and intensity of symptoms.*



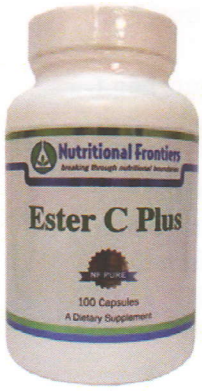
Immunomax Chewables or Capsules

Immunomax Chewable Tablets combine herbs and nutrients to boost immune function during acute illness.*Immunomax contains DMG which, according to research, can help stimulate the immune response by enhancing antibody and lymphocyte production. ImmuneEnhancer™ AG in Immunomax tablets is a source of larch tree-derived arabinogalactans, which support the immune system by increasing the number of immune cells, antibody response, and limiting unhealthy cell replication. Larch arabinogalactans are also known to reduce incidence of upper respiratory infections. Immunomax also contains Maitake D-Fraction® which has been extensively researched as a comprehensive immune support as well as specifically immune-stimulating against cancer cells. Beta-1, 3-Glucans are shown to increase host immune defense by activating complement system, enhancing macrophages and natural killer cell function, as well as induce cellular responses. Although derived from yeast there are no yeast proteins in it. The Beta Glucans are made from the cell walls of baker's yeast, which is then purified, and free of allergenic material.



D3 Capsules or Liquid

Vitamin D is an immune system modulator to support healthy T Cell and macrophage responses and can be taken in doses recommended by your healthcare practitioner to achieve optimal serum levels of this vitamin. Nutritional Frontiers offers vitamin D products in liquid or pills in 1000 or 5000 IU doses to meet your needs.



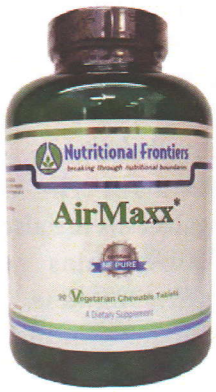
Vitamin C Chewables or Capsules

Vitamin C may help reduce the duration of the common cold, especially in children. Vitamin C is most effective when taken before cold symptoms start. Nutritional Frontiers' Ester C Plus and Cherry Chews provide 2 options for vitamin C supplementation to meet your needs.

Immune Tincture

Immune Tincture by Nutritional Frontiers is a comprehensive herbal blend with a combination of herbs traditionally considered to be immune-stimulating and immune-modulating. Echinacea angustifolia, a wildflower native to North America, is traditionally by herbalists as an immune stimulant. It activates white blood cells and may increase interferon production, which is important in fighting viral infections. Recent research indicates that Echinacea may help reduce the risk of recurrent upper respiratory infection. Traditionally Echinacea is thought to be most helpful at the onset of acute infections rather than for prevention of colds and flu. Astragalus membranaceus is used extensively in Traditional Chinese Medicine as a Qi (chi) tonic. Herbalists also use astragalus as an immune adaptogen. Pau d'arco is a Latin American herb with possible applications for both acute and chronic illnesses including infections and inflammation. Some in vitro studies have shown it to be anti-bacterial, anti-viral, and anti-fungal. Indigenous people in Central and South America as well as Caribbean healers use pau d'arco for infectious diseases, wounds, and other health conditions. Maitake, reishi, and shiitake mushrooms con-

tain complex polysaccharides that enhance immune function. These mushrooms are traditionally classified as immune modulators. Eleutherococcus senticosus, also known as Siberian ginseng, has a long history in Asia of being used to prevent respiratory infections, cold, and flu. Schisandra is used as an adaptogen, helping the body respond to stress. Recent research suggests that some of the lignans present in schisandra have an immunomodulating effect.



AirMaxx Chewables or Tablets

AirMaxx was designed to support proper respiratory and immune function and contains ingredients to maintain histamine levels within normal ranges.* AirMaxx contains quercetin which is a water-soluble bioflavonoid that helps strengthen cell membranes making them less reactive to irritants.* Quercetin may reduce the intensity of allergic reactions.* Perilla seed extract (yielding polyphenols, rosmarinic acid and luteolin) may help help reduce discomfort associated with the aspects of histamine release including skin irritation, redness, sneezing, stuffy nose, overproduction of phlegm, skin and eye irritation, and runny nose. The chewable form of AirMaxx also contains DMG, vitamin C, and bromelain, and the encapsulated form of AirMaxx has the additional benefits of N-acetylcysteine and grape seed extract.

**These statements have not been evaluated by the FDA. The products referred to are not intended to treat, cure, or prevent any disease.*

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The American diet is sadly deficient in healthy fats, including EPA and DHA. Optimal amounts are important for the healthy function of neurotransmitters in your brain, insulin levels, and your heart and bones. Ingesting the right amount can even lower your cancer risk.
If you consume a lot of omega-6 fats, you need more omega-3s. Unfortunately, most people in the U.S. eat 10 times more omega-6s than omega-3s, and often it's highly processed.

The Role of DHA in Preventing Lupus and other Diseases

When the MSU study team investigated the possibilities of DHA being able to protect against lupus and other dangers of crystalline silica, the members were already aware of the anti-inflammatory aspects of omega-3 fats. In fact, DHA is one of the three foremost types of omega-3.

Female mice predisposed to lupus were given one of four types of diets, each containing different percentages of DHA: .4 percent, 1.2 percent, 2.4 percent (equivalent to humans taking 2, 6 or 12 grams of DHA daily) or a control diet.

After two weeks, all four groups of mice were exposed to 1 milligram of crystalline silica per week for four weeks. The lowest DHA amount in the mice diet showed no effect on lung lesions, but according to Harkema in an MSU press release:[7]

"Ninety-six percent of the lung lesions were stopped with DHA after being triggered by the silica. I've never seen such a dramatic protective response in the lung before ... Our next step is to figure out exactly what's happening."

Lead study author James Pestka commented that the study made it clear that ingesting DHA may prevent environmental lupus triggers by suppressing the signaling pathways of the disease.

He added that while drugs are currently being marketed for this purpose, fish containing DHA and obtained from a reliable, non-polluted source can be low in contaminants, which sometimes pose a hindrance to people looking to obtain omega-3s from dietary sources. Those fish include:

- Sardines and anchovies
- Menhaden[8] (a type of herring usually low in contaminants)
- Wild-caught Alaskan salmon

It's crucial to note that, in terms of salmon, only wild-caught Alaskan sockeye salmon is good for you, the main reasons being widely contaminated fishing waters, and that the omega-3s are greatly diminished in farmed salmon.

Studies on DHA Supplementation

People on Western diets often consume far more omega-6 polyunsaturated fatty acids from plant oils than omega-3 fats from healthy sources of seafood or krill oil.

However, omega-3 supplementation is a reliable way to obtain healthy amounts. This is especially true if you're unable to eat the fish listed above, or it's unavailable to you. A number of studies indicate that DHA supplementation may not only suppress inflammation in compromised organs, it might even reverse it. According to Pestka:

"While it should be emphasized that that our study was performed in the mouse, a 'preclinical' model, we believe our research provides new insight into how omega-3s could block environmental triggering of other autoimmune or inflammatory diseases.
For example, occupational exposure to silica has been linked to rheumatoid arthritis (RA). Consumption of omega-3s have been shown to benefit persons with RA."[9]

The European Food Safety Authority (EFSA) recommends taking 250 milligrams of EPA, plus DHA, with no more than 5 grams per day.[10]

While one of the best ways to get omega-3s is by eating non-polluted wild-caught fatty fish at least twice a week, if you don't, you may benefit from taking a supplement. Authority Nutrition recommends making sure the supplement contains adequate amounts of EPA and DHA.

"There is no set standard for how much omega-3 you should get each day. Various mainstream health organizations have released their own expert opinions, but they vary considerably. Overall, most of these organizations recommend a minimum of 250-500 mg combined EPA and DHA each day for healthy adults. However, higher amounts are often recommended for certain health conditions."[11]

The amounts are different if you're pregnant or breastfeeding, because then you'll most likely need more. While the American Dietetic Association and Dietitians of Canada say to take at least 500 mg of omega-3s, including EPA and DHA, per day, the European Commission recommends a minimum of 200 mg of DHA alone, per day. Additionally, before you choose a supplement, make sure you know how much it actually contains.

A Last Note on Fish Oil Supplements

At the University of Ulster, Dr. Emeir Duffy from the School of Biomedical Sciences recently examined the effects of fish oil supplements on 52 lupus patients. Participants divided into four groups were given either three doses of fish oil supplements a day, a copper supplement, copper as well as fish oil, or a placebo.

Omega-3s Can Help Lupus

October 17, 2016 | 24,107 views
By Dr. Mercola

Scientists at Michigan State University (MSU) recently reported encouraging news for people suffering from lupus, an autoimmune disease that affects about 1.5 million people in the U.S.

Lupus attacks your immune system and destroys healthy cells (aka macrophages), tissues and other organs. The most common target is your skin, although your brain, kidneys, lungs and other organs and tissues can also be damaged.

Systemic lupus erythematosus (SLE) is the form seen in 70 percent of cases. Patients often experience unexplained fever, shortness of breath and chest pain, heart or kidney problems, swollen, painful joints, unsightly skin rashes, incapacitating headaches and debilitating fatigue.[1]

One of the biggest problems with lupus is that the medical community isn't sure what causes it. There's no cure, per se, so in most cases, doctors simply treat it. Steroids and other drugs are a popular, albeit side-effect-ridden, remedy. Over the past few years, clinical research has looked at a diet-based approach.

The MSU study, reported in the journal PLOS One,[2] showed that docosahexaenoic acid, or DHA, a type of omega-3, an essential fat, prevented lesions from forming on the lungs of mice predisposed to lupus by stopping a toxic mineral called crystalline silica from triggering the disease.

Causes of Lupus: Occupational, Environmental and Otherwise

Exposure to crystalline silica (cSiO2) is just one of the environmental causes of lupus. It's found in substances such as brick, mortar and concrete, and was placed in a class of carcinogens when scientists discovered that exposure to its miniscule, airborne particulates raised peoples' lung cancer risk.

What makes someone vulnerable to lupus? A Canadian study[3] examined many different ways people can be exposed to crystalline silica, often an occupational hazard, some with higher levels of exposure than others:

Work in a dental office or laboratory	Cosmetics and other beauty products	Artists working with paints or dyes	Artists making pottery or ceramics
Photographers developing film	Nail polish or nail applications	Solvents used to clean metal parts	

Another study, posted by the National Cancer Institute (NIH), showed that this substance, mainly quartz dust, is created when hand-held masonry tools are used to cut concrete or brick. Breathing in silica contained in cleansers, pet litter, caulk, paint and talcum powder can also be dangerous.

"The strongest link between human lung cancer and exposure to respirable crystalline silica has been seen in studies of quarry and granite workers and workers involved in ceramic, pottery, refractory brick, and certain earth industries."[4]

When particles are breathed in, they can penetrate deep into your lungs, potentially raising your lung cancer risk. There are regulations and standards in place by the Mine Safety and Health Administration and the U.S. Occupational Safety & Health Administration (OSHA), specifically related to silica exposure.[5]

PLOS One study co-author Jack Harkema, from the Institute for Integrative Toxicology at MSU, noted:

"Cells in the lung can gobble up the silica, but it's so toxic, it kills these cells. When they die, signals are sent out to the immune system that something is wrong. The body then produces such a strong response that it also starts to target healthy cells."[6]

That's why the study showing the dramatic turn-around omega-3s can make in turning lupus and other diseases around is so remarkable.

The Importance of Omega-3 Fats, DHA and EPA

The best sources of animal-based omega-3 fats come from the DHA and eicosapentaenoic acid (EPA) provided in krill oil and certain fatty, cold-water fish, produced by the algae that fish eat and store in their bodies.

This doesn't refer to plant-based ALA (alpha-linolenic acid), found in flaxseeds, chia seeds and hemp. Those foods are good for you, but it's best to get omega-3s from animal sources.

Your body can convert ALA to EPA and DHA, but only when there are enough enzymes (which is seldom the case) and even then only a minimal amount, so it would require ingesting much more.

Those who took the fish oil "saw improvements in quality of life, inflammation and fatigue, which is one of the most debilitating symptoms of lupus." The copper had no benefit one way or the other. Duffy was quoted in Epic 4 Health:

"Some found it fantastic, and they went from being severely affected in their daily life to actually joining the gym and having a huge difference in what they could do. Others saw a mild improvement, being able to go out and do the shopping which is a big bonus to some people who can't even leave the house."[12]

Please note there are many advantages of krill oil over fish oil, which you can read about in detail here. For instance, when you consume fish oil, your liver has to attach it to phosphatidylcholine in order for it to be utilized by your body. Krill oil already contains phosphatidylcholine, which grants it superior bioavailability.

Even if you don't work in a job where you're likely to handle or breathe in silica particles, consuming omega-3 fats is essential for health.

HOW MUCH MERCURY IS REALLY IN A FLU SHOT?

Here's What ICP-MS Tests Revealed:

2 ppb - Maximum mercury contaminant level in drinking water set by EPA

250 ppb - Typical mercury level in tuna

500 ppb - Highest level detected by Natural News in contaminated whitefish

51,000 ppb - Level of mercury **FOUND IN A FLU SHOT**

(ppb means parts per billion)

ALL FORMS OF MERCURY ARE TOXIC TO HUMANS.

See real-time news updates at Vaccines.NaturalNews.com

SOURCES:

- ICP-MS laboratory testing at the Natural News Forensic Food Lab
- Package insert of Flulaval Influenza Virus Vaccine from GlaxoSmithKline