

A Thought Leadership Guide to Immune Health[‡]

Developed by our consortium of functional and integrative medicine experts from around the world, led by functional immunologist Sam Yanuck, DC, FACFN, FIAMA⁺

Tier 1: Essential Nutrients for Immune Health

Choose products from each tier to advantage your immune system in 5 key ways.

Key Nutrients	Product Recommendations [†]	Description
Vitamin C	Ascorbic Acid P Ester-C P Liposomal Vitamin C liquid P Buffered Ascorbic Acid P Acerola/Flavonoid P	Vitamin C supports a wide range of physiological functions, including immune function and vascular integrity. It supports the body's defense system by enhancing white blood cell function and activity, and increasing interferon levels, antibody responses, and secretion of thymic hormones. [‡]
Zinc	Zinc 30 P Zinc 15 P Zinc Citrate P UltraZin P	Zinc supports the body's natural defense system. UltraZin Zinc utilizes an innovative microencapsulation technology to enhance the absorption and bioavailability of zinc. This technology creates a phospholipid bilayer around the mineral similar to a liposome, increasing solubility and absorbability. [‡]
Vitamin D	Vitamin D3 (10 mcg, 25 mcg or 125 mcg) P Vitamin D3 liquid P Vitamin D3 (Vegan) liquid P Vitamin D3 VESISorb P	Vitamin D's role in immune health has long been established; vitamin D receptors are found on a number of immune cells, including lymphocytes and macrophages, supporting healthy immune cell activation. Vitamin D also supports cardiovascular function in some individuals. [‡]
Selenium	Selenomethionie D	Selenium supports antioxidant defenses, immune function and cellular health. Take several times per week rather than daily. [‡]
Vitamin A	Vitamin A + Carotenoids P Beta Carotene (with Mixed Carotenoids) P	Vitamin A is essential to the healthy functioning of a number of biological processes, including vision, growth, reproductive function and the body's defense system. It also supports healthy maintenance of mucous membranes. [‡]
Probiotics w/ vitamins	HMF Immune G HMF Immune powder G HMF Fit For School G HMF Fit for School powder G	HMF Immune combines proprietary probiotics with vitamins C and D to provide targeted support for the immune system. In addition to supporting gastrointestinal health, HMF Immune provides BI-04, a strain that has been shown in a clinical trial to support upper respiratory tract health in physically active adults. Similarly, it offers CUL-60, CUL-21, CUL-34 and CUL-20, which were demonstrated in a clinical trial to support upper respiratory tract health in children when combined with vitamin C. HMF Fit For School includes a combination of research-driven probiotic strains and vitamin C that supports children's upper respiratory tract health and immune function. In a recent clinical trial, 57 schoolchildren were randomized to receive either a placebo tablet or HMF Fit For School's probiotic formula plus 50 mg of vitamin C daily for 6 months. Children in the probiotic plus vitamin C group had significant improvement in upper respiratory tract health. HMF Fit For School also includes 25 mcg (1000 IU) of vitamin D per tablet to provide additional immune support. [‡]

[†]Please note that patients may not require all supplements listed.

⁺Samuel Yanuck is a retained consultant for Pure Encapsulations

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Tier 2: Support for NK Cell Activity

Choose products from each tier to advantage your immune system in 5 key ways.

Support for NK Cell Activity (& More)	Product Recommendations [†]	Description
All-in-one	Innate Immune Support ^P PureResponse Multivitamin ^P	Innate Immune Support is designed to promote cell-mediated immune response, including NK cell and macrophage activity. Innate Immune Support may be indicated for enhancement of natural defenses and mucosal health. In a randomized, double-blind, placebo-controlled study, supplementation with 200 mg of AP-Bio [®] Andrographis for five days promoted immune function and supported respiratory comfort. In vitro assays suggest it helps modulate IL-1, IL-6 and MCP-1 to support macrophage function. PureResponse Multivitamin is designed to support key pivot points in immune function, including neutrophil and NK cell response, and cytokine production. [‡]
Black Currant Seed	Black Currant Seed Oil ^P	Black currant seed oil contains gamma linolenic acid (GLA), a fatty acid that has multiple physiological roles. Studies have shown that GLA promotes healthy prostaglandin E1 (PGE1) production. Researchers at the University of Massachusetts medical school reported that GLA helps support healthy cytokine activity. Another randomized, double-blind, placebo-controlled trial performed at the Jean Mayer USDA Human Nutrition Research Center on Aging reported that black currant seed oil supplementation provided immune support in elderly subjects. [‡]
AHCC	AHCC [®] Plus ^D	AHCC [®] is a unique mushroom-derived extract designed to provide support to the immune system. Beta-glucans, amino acids and minerals present in AHCC [®] may play important roles in its immune-supportive properties. Scientific studies using AHCC [®] in animals and humans suggest that it has immunomodulating activity. Research indicates that AHCC [®] may serve a vital function in supporting the body's natural defense mechanisms. [‡]

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Tier 3: Boost Th1 Response

Choose products from each tier to advantage your immune system in 5 key ways.

Boost Th1 Response (& More)	Product Recommendations [†]	Description
All-in-one	Th1 Support P	Th1 Support is designed to support healthy activation of Th1 cells to promote innate immunity and cell-mediated immune defenses. Th1 responses are affected by stress, aging, and cytokine changes resulting from metabolic, hormonal, physiological, and environmental factors. [‡]
Glutathione	Liposomal glutathione P Reduced Glutathione P NAC P	Glutathione is a key component of the antioxidant system which protects the body from free radicals at the cellular level. Reduced glutathione is involved in the synthesis and repair of DNA, and enhances the antioxidant activity of vitamin C, the transport of amino acids, and the detoxification of harmful compounds. N-Acetyl-L-Cysteine (NAC) is a derivative of the dietary amino acid L-cysteine. NAC has a high affinity for lung tissue, which it supports through mucolytic and antioxidant action. NAC supports tissue levels of glutathione, a key component of the antioxidant defense system. [‡]
Berberine	Metabolic Xtra P	Clinical and preclinical studies show that berberine positively influences immune biomarkers related to cell and tissue health, and in vitro evidence suggests that berberine supports maturation of T cells into Th1 cells and production of IL-12, an important Th1-promoting cytokine. [‡]
Chinese skullcap	Balanced Immune P	Baicalin from Skullcap offers support for healthy production of interferon gamma, promoting Th1-type immune responses, according to animal studies. [‡]
Broccoli	UltraDetox 10-Day Pure Pack P Detox 10-Day Pure Pack P Liver GI Detox P DIM Detox P Nrf2 Detox P	Sulforaphane from broccoli promotes various aspects of immunological homeostasis that maintain the health of mucosal cells. Cellular and animal models also suggest support for Th1-promoting interferon gamma and interleukin-2 production. [‡]
Ginger	Ginger Extract P	Ginger modulates the production of IL-6 and TNF-alpha, according to preclinical data. [‡]

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Tier 4: Maintain Cytokine Balance

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Maintain Cytokine Balance (& More)	Product Recommendations [†]	Description
All in one	Balanced Immune ^P	Balanced Immune is designed to support immune balance and tissue integrity, in part by targeting the NLRP and NF-κB pathways to modulate cytokine production. Curcumin is included in this formula as clinically researched and patented Meriva [®] curcumin-phosphatidylcholine complex. Pharmacokinetic data suggests a 20-fold increase in relative absorption compared to standard curcumin. Black ginger and resveratrol promote healthy SIRT1 protein levels. SIRT1 supports cellular homeostasis. Sulforaphane and resveratrol modulate the activity of Nrf2. Nrf2 is a transcription factor that supports cellular function by promoting robust, long-lasting expression of numerous genes by promoting cellular protection against oxidative stress and detoxification. [‡]
Curcumin	Curcumin ^P Curcumin 500 with Bioperine ^P CurcumaSorb ^P CurcumaSorb Mind ^P	Curcumin has a long history of use for supporting healthy cyclooxygenase, prostaglandin and leukotriene metabolism. It also appears to maintain healthy cell cycle function and provides important antioxidant defense. Furthermore, it supports the body's natural detoxification system and helps maintain healthy hepatic function. CurcumaSorb provides the patented Meriva [®] curcumin-phosphatidylcholine complex for enhanced-absorption & bioavailability. [‡]

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Tier 5: Sleep and Adrenals

Choose products from each tier to advantage your immune system in 5 key ways.

Sleep & Adrenals	Product Recommendations [†]	Description
Adaptogen support	PhytoADR ^P Panax Ginseng ^P	Panax ginseng and Eleutherococcus senticosus, or eleuthero, are highly recognized adaptogens, promoting physiological balance and moderating occasional stress. Rhodiola can have a calming effect on the central nervous system. In particular, rhodiola may moderate the effects of occasional physical and emotional stress. Recently, a double-blind cross-over study suggests that rhodiola may help to moderate mild fatigue under stressful conditions. Collectively, these ingredients support the health and activity of the adrenal glands. [‡]
Melatonin	Melatonin (0.5 mg or 3 mg) ^P Melatonin-SR ^P Sleep Solution ^P	Melatonin is a hormone produced by the pineal gland, which regulates the body's sleep/wake cycle. Melatonin's primary role is regulation of the body's circadian rhythm, endocrine secretions, and sleep patterns. Studies indicate that it facilitates the onset of sleep, as well as sleep efficiency. [‡]

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