Immune Health - Naturally

The immune system is an amazing and complex work of nature; it does an incredible job defending the body against any number of illnesses and infections, at least when it is functioning properly. Unfortunately, patients sometimes relate a lack of symptoms to being well and/or having/possessing a strong immune system, while they misunderstand an increase in symptoms as an indicator of a weak immune system or worsened health. In many cases, a patient’s desire for comfort – perhaps influenced by standard Western medicine – results in a desire to work against the body by suppressing the immune system. If there is a fever, lower it; in case of inflammation, reduce it; and when confronted with a microbe, kill it with antibiotics.

Such an approach might be effective in the short term, and is certainly appropriate in situations that threaten life or limb, but overuse of this approach may cause more health problems than it solves. Specifically, treatments that suppress the body’s natural immune responses can make the immune system weak or overactive, leading to its ineffectiveness, not to mention ignoring underlying health issues that may become chronic. Clearly a broader understanding of immune function is required to appreciate our natural defense systems and the significance of symptoms.

A Natural Approach to Building Immunity

The immune system protects the body from infection with a layered defense system, which begins with physical barriers – both mechanical and chemical/biological – that prevent pathogens from entering the body. For example, coughing and sneezing mechanically expel pathogens from the respiratory tract as does the flushing action of tears and urine. Mucus secreted by the respiratory and gastrointestinal tract also provides a physical barrier for microorganisms. In addition to these mechanical barriers, the body employs a number of chemical barriers including antimicrobial peptides secreted by the skin and respiratory tract; enzymes in saliva, tears, and breast milk; gastric acid and proteases in the stomach; and commensal flora that create an unfriendly environment for pathogenic bacteria within the genitourinary and gastrointestinal tracts.

When physical barriers fail or are insufficient, the body’s second line of defense is our innate immune system, which provides a non-specific response to invading pathogens. One of the symptoms resulting from this non-specific response is inflammation, including redness and swelling caused by increased blood flow into a tissue. Inflammation is produced by cytokines and prostaglandins that produce fever and leukotrienes that attract certain white blood cells...
Common cytokines include interleukins that are responsible for communication between white blood cells and interferons that have antiviral effects. Growth factors and cytotoxic factors may also be released as a result of inflammation. The innate leukocytes include the phagocytes (macrophages, neutrophils, and dendritic cells) and natural killer cells that identify, attack and eliminate pathogens. Collectively these reactions recruit immune cells to the infection site and promote healing of damaged tissue after removal of pathogens.

Our bodies possess a third layer of protection, the adaptive immune system, which is activated by the innate response. When the adaptive response is activated, the body improves its recognition of the pathogen and this improved response is retained even after the pathogen is eliminated. As a result, the body is able to respond faster and stronger in the event the same pathogen is encountered again.

Infections, particularly viral infections like those that accompany the flu season, are opportunistic: they exploit compromises in physical barriers and/or the innate immune system (skin, respiratory cilia, cough reflex, mucus production, hormone status, immune cell function, and production of gastric hydrochloric acid, among others). Infections only have a negative impact on health if they get “in,” and they only get in if/where the immune defense is weak. Each year an estimated 5 to 20 percent of Americans come down with the flu. And although most people recover from the flu without incident, flu-related complications result in more than 200,000 hospitalizations and 36,000 deaths annually.

**Ingredients that Assist in Building Immunity**

There are many factors that can lead to a weakened or deteriorated immune system including poor diet/nutrition, insufficient sleep or exercise, and stress. Thankfully it is also possible to strengthen the immune system with vitamins, minerals, herbs, and glands that build/enhance physical, chemical, or biological barriers; have antimicrobial properties; assist the body’s ability to recognize and respond to pathogens; or otherwise gird the innate immune complex.

**Vitamin A** deficiency is an immunodeficiency disorder characterized by widespread alterations in the immune system including degradation of mucosal surfaces, impaired antibody responses, changes in lymphocyte subpopulations, and altered T- and B-cell function. Vitamin A and its metabolites are immune enhancers that have been shown to increase lymphocyte proliferation responses to antigens and restore the integrity and function of mucosal surfaces, including those in the lungs.

**Vitamin B12** is involved in a number of key body processes, but is especially key to red blood cell production, nervous system function, normal growth, and the proper function of the immune system. In particular, vitamin B12 likely plays an important role in cellular immunity, especially related to CD8+ cells and the natural killer cell system.

**Vitamin C (Ascorbate)** plays an important role in supporting immune function and combating infections. Specifically, ascorbate is involved in leucocyte migration and phagocytosis and perhaps interferon production. Moreover, leucocytes contain high concentrations of ascorbate and viral infection rapidly depletes leucocyte ascorbate. Although study results vary, Vitamin C may contribute to a reduced incidence of influenza, reduced or shortened symptoms associated with a cold or flu virus, and/or faster recovery from these infections.
**Vitamin D**, which is made in the skin when it is exposed to solar radiation, is a hormone that regulates hundreds of genes including some involving the body’s defenses against infection, especially those affecting the respiratory system. After it is consumed in the diet or synthesized in the epidermis, vitamin D enters the circulatory system and is transported to the liver where it is hydroxylated to form 25-hydroxyvitamin D. In the kidney, an enzyme catalyzes a second hydroxylation of 25-hydroxyvitamin D, resulting in the formation of 1,25-dihydroxyvitamin D – the active and most potent form of vitamin D that inhibits proliferation of cells and stimulates their differentiation. As a result, vitamin D helps fight bacteria, viruses, and other pathogens by enhancing the body’s ability to recognize them and helps regulate anti-bactericidal proteins that are essential in the immune system’s innate defense.

**Iodine** levels are important for proper function of the thyroid gland and iodine is a constituent of the thyroid hormones, thyroxine (T4) and triiodothyronine (T3). Additionally, iodine is accumulated by the immune system especially by neutrophils during phagocytosis (engulfing of bacteria and other foreign bodies). A potent antimicrobial system is created with a peroxidase, hydrogen peroxide, and a halide. The results appear highly effective against bacteria, viruses, fungi, and other micro-organisms.

**Zinc** is known to play an important role in the immune system and zinc-deficient patients may experience increased susceptibility to a variety of pathogens. Zinc affects multiple aspects of the immune system, from the barrier of the skin to gene regulation within lymphocytes. Zinc is also critical for the development and normal function of cells that mediate nonspecific immunity such as neutrophils and natural killer cells. Zinc deficiency adversely affects the macrophage, a pivotal cell in many immunologic functions. The result is impaired regulation of intracellular killing, cytokine production, and phagocytosis. The effects of zinc on these key immunologic mediators is rooted in the many roles zinc plays in basic cellular functions such as DNA replication, RNA transcription, cell division, and cell activation.

**Echinacea angustifolia** enhances the body’s natural resistance to bacterial organisms by stimulating macrophage activity. Echinacea may also increase production of interferon, an important part of the body’s response to viral infections. The active constituents in Echinacea angustifolia include alkylamides, cichoric acid and polysaccharides, which provide immunomodulation as well as anti-inflammatory, antibacterial, and antiviral effects.

**Goldenseal (Hydrastis canadensis)** is often used for its antimicrobial and astringent effects, as well as its soothing effect on mucous membranes and its immunity-enhancing qualities. Goldenseal is also thought to be oxytocic and a digestive stimulant. The active constituents of Goldenseal, such as isoquinoline and alkaloids (hydrastine, berberine, canadine), have been widely studied. Traditionally this herb has been used as a topical antimicrobial as well as for the treatment of influenza, sore throat, and the common cold. Goldenseal provides restorative action to mucous membrane tissues that provide an important physical barrier to pathogens.
stimulating natural killer cells, cytotoxic T-cells, interleukin, and superoxide anions.

**Beta 1, 3 D Glucan** is a naturally-occurring polysaccharide found in a variety of cells. When taken as a supplement, it is absorbed through the intestinal wall and is bound to innate immunity cells that are activated in a natural immune response. In this way, beta glucan helps to stimulate and activate the immune system without over-stimulating it. Additional studies have investigated the ability of beta glucan to assist the body in lowering cholesterol levels, promoting rapid wound healing, protecting against radiation exposure, and inhibiting viral, staphylococcal, pseudomonas, and candida pathogenicity.

**Probiotics** play a huge role in healthy immune function by populating the digestive tract and directly or indirectly impeding harmful bacteria. Most antibiotics non-specifically target bacteria (including helpful probiotics) but do not affect fungi; consequently, antibiotics can lead to an overgrowth of fungi. Re-introduction of probiotic flora restores a healthy balance of microbial populations in intestinal infections and may assist the body in cases of bacterial gastroenteritis, inflammatory bowel diseases, urinary tract infection, and post-surgical infections.

**Glands** that comprise the endocrine system interact with our immune systems in highly complex ways. Abnormalities of T-suppressor cells can result in autoimmune conditions that cause destruction of endocrine glands and hormone deficiency. On the other hand, endocrine deficiency (hypothyroidism) or excess states (hyperadrenocorticism) may cause abnormalities of cell-mediated and antibody-associated immunity, leading to susceptibility to a variety of viral, bacterial, and fungal infections. Glandular supplementation aids the body by stimulating and tonifying specific organ tissues by providing factors or enzymes not present or active.

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**Immune Health Products**

- High Energy Echinacea Liquescence (T33)
- Immune Enhancement Liquescence (T29)
- Immune System Stimulator Drops (C33)
- Astragalus Complex (B3AST)
- Echinacea 2000 Blend (BE2000)
- Forest Immunity (PMUSH)
- ImmunoTone (PIT)
- Mushroom Complex (B30MU)
- Raspberry Echinacea angustifolia/Goldenseal Complex (E10, E10A, E10B)
- Acidophilus / Bifidus High Potency Caps (SABC)
- Acidophilus / Bifidus Plus Concentrate (SAB4)
- Beta 1,3 D Glucan (SB13)
- Bio Terrian Alkaline Caps (SBTAC)
- Bio Terrian Alkaline Powder (SBTA)
- Colostrum (SCOL)
- Immuno Spray (SIS)
- Immustim Complex (GIMC/GIMCLG)
- Pro Defense Max (SPFM)
- Vitamin A Mulsion (VAM)
- Natural Beta-Carotene Mulsion (VBAM)
- Vitamin B12 Folic Acid (VB12)
- Vitamin B12 Sublingual (VB12S)
- Buffered Vitamin C Ascorbate Caps (VCAC/VCACLG)
- Vitamin C Ascorbate Powder (VCA)
- Vitamin C 1000 Plus (VC1000)
- Vitamin C Chewable (VCC)
- Vitamin C Drink (VC3000/VC3016)
- Vitamin D3 1,000 (VD3)
- Vitamin D3 5,000 (VD5000)
- Organic Iodine (MOI)
- Silver Oligo (OAG25/OAG5)
- Zinc Oligo (OZN)
- Zinc Plus Lozenges (MZNL)

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For additional information on specific infection support please call to request PCHF’s Infection Newsletter.

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These statements have not been evaluated by the Food and Drug Administration. No statement in this bulletin shall be construed as offering these products for the diagnosis, cure, mitigation, treatment, or prevention of any disease.
PCHF Natural Immune Health Remedies

Professional Complementary Health Formulas (PCHF) offers a wide range of high-quality vitamins, minerals, glandulars, botanicals, and homeopathic products with ingredients that directly or indirectly enhance the body’s natural immune barriers and innate immune responses.

**Homeopathic Products**

**High Energy Echinacea Liquescence (T33):** Homeopathic formula that provides drainage, tonification, and homeopathic aid in support of minor infections, fever, chills, and aching with lower alcohol for children.
*Ingredients:* Echinacea angustifolia, Echinacea purpurea, Thymus, purified water, 5% cherry juice, 10% USP alcohol, 8% glycerin.

**Immune Enhancement Liquescence (T29):** A popular drainage formula that provides homeopathic support for immune health, particularly related to recurrent bacterial and viral infections.
*Ingredients:* Echinacea angustifolia, Echinacea purpurea, Hyaedras canadensis, Populus candicans, Kali bichromicum, Mercurius solubilis, Hepar sulphuris calcareum, Cinchona, lodatum, purified water, USP alcohol.

**Immune System Stimulator Drops (C33):** A combination homeopathic formula that provides homeopathic support for the body’s immune system with isodes/sarcodes of the Appendix, Tonsils, Thymus, Spleen, Bone marrow, Liver, and Adenoids.
*Ingredients:* Berberis aquifolium, Echinacea angustifolia, Aqua marina, Petroselinum sativum, Adenoids, Appendix, Bone marrow, Liver, Spleen, Thymus, Tonsils, Saccharinum, purified water, USP alcohol.

**BotaniPure™ Encapsulated and Liquid Herbs**

**Astragalus Complex (B3AST):** A synergistic combination of adaptogenic herbs known to provide an immunostimulant action. May be used long term as a preventive measure against infection.
*Ingredients:* Astragalus, Eleutherococcus senticosus, and Echinacea angustifolia.

**Echinacea 2000 Blend (BE2000):** Combines Echinacea purpurea and Echinacea angustifolia that have been spray dried at a 4:1 extract and is equivalent to a 2,000 mg dose. Echinacea is used for the common cold, upper respiratory infections, and also used as an immunostimulant for fighting a variety of other infections.
*Ingredients:* Echinacea purpurea and Echinacea angustifolia.

**Forest Immunity (PMUSH):** High potency mushroom complex combines the healing power of four high quality mushroom extracts (Cordyceps, Shiitake Mushroom, Maitake Mushroom, and Reishi Mushroom) known to boost immunity. Can be targeted to treat specific conditions such as high blood pressure or a viral infection, or used as an everyday supplement to achieve a high-functioning immune system.
*Ingredients:* Reishi mushroom, Shiitake mushroom, Maitake mushroom, and Cordyceps mushroom.

**ImmunoTone (PIT):** Combines herbs known for their antimicrobial and immune enhancing effects.
*Ingredients:* Chiretta (Andrographis paniculata), Echinacea (Echinacea purpurea), Cat’s claw (Una de gato), Astragalus (Astragalus membranaceus), Phyllanthus (Phyllanthus amarus), St. John’s wort (Hypericum perforatum).

**Mushroom Complex (B30MU):** A liquid mushroom combination formula to assist the immune system in the treatment of viral infections and other degenerative conditions.
*Ingredients:* Reishi mushroom, Shiitake mushroom, Maitake mushroom, and Cordyceps mushroom.

**Raspberry Echinacea angustifolia/Goldenseal Complex (E10/E10A/E10B):** Used as a natural antibiotic and to boost the body’s natural defenses against infection. Formulated for maximum immune support with a full-spectrum concentration of the most important constituents of both Echinacea angustifolia root and Goldenseal root.
*Ingredients:* Echinacea angustifolia and Goldenseal (Hydrastis canadensis). In a base of 20% Glycerin, 25% Alcohol and natural raspberry flavoring.

PCHF also carries a full line of over 250 single botanical liquid extracts including many of these herbal constituents. Please see PCHF’s herbal ‘green’ price sheet or call 800.952.2219 for more information about any of these additional single herbal formulas.

**Glandular and Specialty Formulas**

**Acidophilus / Bifidus High Potency Caps (SABC) Acidophilus / Bifidus Plus Concentrate (SAB4):** These high potency symbiotic lactobacillus acidophilus products help the body replenish good flora and ease disturbances of the GI tract. Our methods of manufacturing and distribution ensure the freshest product possible.
*Ingredients:* Powder (SAB4) with 5 billion CFU/g Bifidobacterium bifidum, 5 billion CFU/g Lactobacillus acidophilus, 2 billion CFU/g each of Bifidobacterium longum and Bifidobacterium lactis. Capsule (SABC) with 7 billion CFU/g each of Bifidobacterium bifidum and Lactobacillus acidophilus.

**Beta 1,3 D Glucan (SB13):** PCHF’s Beta 1,3 D Glucan is a naturally-occurring polysaccharide derived from the cell wall of the yeast strain Saccharomyces cerevisiae. Assists by enhancing immunological function and lipid levels.
*Ingredients:* Beta 1,3 D Glucan 500 mg.

**Bio Terrian Alkaline (SBTA/SBTAC):** Powder or Capsules to help establish homeostasis by balancing potentially harmful acidic terrain, which can invite infection, bacteria, and parasites. Buffered ingredients help with digestion and also provide a good source of calcium and magnesium.
*Ingredients:* Powder: Sodium bicarbonate, Calcium carbonate, Magnesium citrate, Potassium bicarbonate, Cell salts (6X homoeopathic), Citric acid, Sea salt, Potassium citrate. Caps: Sodium bicarbonate, Calcium carbonate, Magnesium citrate, Potassium bicarbonate, Citric acid, Sea salt, Potassium citrate, Cell Salts (6X homoeopathic).

**Colostrum (SCOL):** Pure New Zealand Bovine Colostrum that tonifies the immune system and aids the body’s resistance to infection. *Ingredients:* Bovine Colostrum (New Zealand) 500 mg.

**Immuno Spray (SIS):** A nutritional spray formula of Zinc gluconate, Echinacea angustifolia, New Zealand Thymus gland, and 10% cherry juice that may assist in boosting a deficient immune system.
*Ingredients:* Zinc, Echinacea angustifolia, and Thymus (New Zealand).
Immmustim Complex (GIMC/GIMCLG): This certified New Zealand glandular provides multiple lyophilized gland concentrates with synergistic ingredients from the most therapeutically active sources to enhance immune system response and help combat infection.

Ingredients: Vitamin A (fish liver oil), Vitamin E (d-Alpha tocopheral), Vitamin C (L-ascorbic acid), Echinacea purpurea, Lymph tissue, Spleen tissue, Thymus tissue, Bee pollen, Placenta tissue, Bone marrow, Parotid tissue, Adrenal tissue, and Zinc (aspartate).

Pro Defense Max (SPFM): Formulated to enhance the body’s defense system and provide nutritional support. Take at the first sign of imbalance or indication that the immune system has been compromised.

Ingredients: This formula combines 250 mg of Grapefruit Seed with Andrographis paniculata, Astragalus membranaceus, Echinacea angustifolia, Reishi mushroom, Maitake mushroom, Shiitake mushroom, Ginger Root, Goldenseal, Yarrow, and Zinc.

Vitamins, Minerals and Oligo Elements

Vitamin A Mulsion (VAM): Provides the highest quality Vitamin A palmitate, emulsified to maximize absorption and to permit greater metabolism of the vitamin. Can be used wherever high quantities of Vitamin A may be indicated.

Ingredients: Vitamin A (palmitate), Vitamin E (d-Alpha tocopheral).

Natural Beta-Carotene Mulsion (VBAM): Beta Carotene is a trusted antioxidant and naturally safe source of pro Vitamin A emulsified to maximize absorption and to permit metabolism of a higher level of vitamin. Beta Carotene is a pro-vitamin needed by the liver to synthesize Vitamin A (retinol).

Ingredients: Beta Carotene (Pro Vitamin A), Vitamin A activity including: Beta Carotene 94.5%, Alpha Carotene 3.5%, Cryptoxanthin 1.0%, Zeaxanthin .5%, Lutein .5%, and Vitamin E (d-Alpha tocopherals).

Vitamin B12 Folic Acid (VB12): 1,000 mcg Cyanocobalamin (B12) for red blood cell production and overall immune function. Predictable sustained release is water sensitive and ensures a uniform dispersion within the digestive tract over a period of not more than eight hours.

Ingredients: Cyanocobalamin (vitamin B12) and Folic acid.

Vitamin B12 Sublingual (VB12S): Sublingual tablets absorb directly into the bloodstream with 1,500 mcg of pure Cyanocobalamin (B12) in a naturally flavored cherry juice tablet for rapid sublingual absorption.

Ingredients: L Cynacobalamin (vitamin B12).2

Buffered Vitamin C Ascorbate (VCAC) Capsules & Vitamin C Ascorbate (VCA) Powder: Concentrated source of Vitamin C, well tolerated in large doses without stomach or GI distress. Essential minerals provide the buffering mechanism and compensate for mineral loss. Bioflavonoids enhance the actions of the Vitamin C. Our powder and capsule formulas vary slightly and intentionally for optimal absorption with each delivery method.

Ingredients: Powder: L-Ascorbic acid, Magnesium, Calcium, Potassium, Bioflavonoids, Zinc, Manganese, Molybdenum, Vanadium, Chromium (GTF), Selenium. Caps: L-Ascorbic acid, Bioflavonoids, Magnesium, Calcium, Amla, Potassium, Grapeseed (OPCs).

Vitamin C 1000 Plus (VC1000/VC1180): This complex of 1,000 mg of Ascorbic acid provides a synergistic blend of botanical and nutritional forms of vitamin C and several bioflavonoids. This formula is well-suited for assistance with high fevers, colds and flu symptoms and comes in tablet form for sustained release and optimal absorption.

Ingredients: Vitamin C (L-Ascorbic acid), Lemon bioflavonoids, Rose Hips (Rosa canina), Hesperidin complex, Rutin.

Vitamin C Chewable (VCC): Supplies a synergistic blend botanical and nutritional vitamin C. Additionally, our Vitamin C Chewables are blended with all natural powdered orange juice and natural juice sweeteners to provide a pleasant tasting chewable vitamin C supplement that is a great option for all ages.

Ingredients: Vitamin C (L-Ascorbic acid), Rose hips (Rosa canina), Acerola (Malpighia glabra), in a base of powdered natural orange juice and natural juice sweeteners.

Vitamin C Drink (VC3000/VC3016): A high potency Vitamin C powder for adults and children over age four. Contains a complex of 3,000 mg L-Ascorbic acid plus bioflavonoids and other ingredients that make this a great choice for fevers, colds and flu symptoms. Can be administered as a tea-like drink, hot or cold.

Ingredients: L-Ascorbic acid (vitamin C), Bioflavonoids, Hesperidin complex, Rose hips (Rosa canina), Acerola conc. (Malpighia glabra), Rutin, Echinacea purpurea, Naturally lemon flavored.

Vitamin D3 1,000 (VD3) & Vitamin D3 5,000 (VD5000): Made with the highest quality preservative-free, gluten-free Vitamin D3 Cholecalciferol from a natural fish liver oil source. Designed for better absorption and effectiveness than D2, our D3 stays in the patient’s body longer, providing more benefit. Available in either a 1,000 or 5,000 I.U. per perle dose for ease of administration.

Ingredients: Vitamin D3 Cholecalciferol (natural fish liver oil).

Organic Iodine (MOI): Rich complex of 100% active colloidal and organic iodine in a natural elemental state delivered in a base of Alfalfa, that provides a rich source of nutrients, flavones, isoflavones, and sterols. Combined with Sea Dulse that assists the body in absorbing critical iodine.

Ingredients: Iodine (potassium) in a base of glycerin, alfalfa extract, and sea dulse extract.

Silver Oligo (OAG5/OCAG25): (5ppm/25ppm) A powerful, natural antibiotic. Silver has been traditionally used to prevent or treat the symptoms of multiple conditions including colds, flu and various infections.

Ingredients: Supplies free ionic colloidal silver at either .005 or .025mg per ml and .6mg or 1.5mg per bottle in a 10% USP alcohol and 8% glycerin aqueous solution. Available in a water or alcohol based formula.

Zinc Oligo (OZN): Indicated in immune deficiency, malabsorption of zinc, and a high PSA test.

Ingredients: Supplies free ionic zinc at .1645 mg of zinc gluconate per dose, .235 mg per ml and 1.5mg per bottle in a 10% USP alcohol and 8% glycerin aqueous solution.

When using any of our Oligo formulas for immune support, consider using with Immmustim Complex, Immune System Stimulator, and High Energy Echinacea Liquesence.

Zinc Lozenges (MZNL): PCHF’s Zinc Lozenges feature a combination of ingredients focused on fighting the common cold with a great tasting, naturally sweetened flavor.

Ingredients: Vitamin C (L-ascorbic acid), Bee propolis (concentrate), Echinacea purpurea (4:1), Zinc (gluconate/citrate).

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