

Protocol for Nutritional **IMMUNITY BALANCE** Support

Practitioner Information - Protocol For Life Balance™ Supplements

Immune balance involves factors such as diet and digestion, exercise and other life style components that influence stress, regulation of inflammation, and immune activation. The emphasis here is upon balance. This protocol addresses the need to both encourage immune function and modulate inflammation, which is an aspect of immune activation that can become immunosuppressive at excessive levels. The individual components below can be combined as a protocol for more complete support.

Ultra Omega-3 (Molecularly Distilled)

Omega-3 Fatty Acids (FAs) found in fish oils are widely recognized for a variety of health benefits. The most important omega-3 fatty acids are eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Studies have demonstrated that omega-3 FAs are important in numerous signaling pathways. Most notably, EPA is a precursor of certain prostaglandins and leukotrienes, molecules that are involved in modulating inflammatory responses. These two classes of signaling molecules are critical for the maintenance of cardiovascular health and immune system function. Moreover, long-chain omega-3 fatty acids from fish oil decrease the production of inflammatory cytokines and eicosanoids. These fatty acids act both directly (by replacing arachidonic acid as an eicosanoid substrate and by inhibiting arachidonic acid metabolism) and indirectly (by altering the expression of inflammatory genes through effects on transcription factor activation) (1).

Even at levels of intake that do not significantly modulate cytokine levels, omega-3 fatty acids can positively influence plasma concentrations of soluble vascular cell adhesion molecule-1 and soluble E-selectin, factors important to endothelial function (2). Recent clinical studies have emphasized the beneficial impact of omega-3s on serum lipid metabolism. The FDA allows the claim that the consumption of omega-3 fatty acids may reduce the risk of coronary heart disease.

Cautions and interactions

Omega-3 fatty acids may interact with aspirin or warfarin. In addition, omega-3 fatty acids may interact with cholesterol-lowering statin medications. Omega-3 fatty acids may be used as a dietary supplement if taking certain medications, including cyclosporine, and may interact with topical corticosteroid treatment.

Ortho Dophilus™

Food affects gastrointestinal health in part through its impact on gut bacteria. Conversely, the health benefits of many foods, such as broccoli, depend upon how components are changed by bacteria in the intestines. Recently, researchers have begun to look more closely at the combination of probiotic bacteria with various prebiotics, which are items ingested to encourage proper bacterial growth and actions in the GI-tract. These synbiotics can exhibit benefits not found with either probiotics or prebiotics taken alone (3 - 5). This Protocol for Life Balance™ component is a combination of 8 different species of beneficial bacteria designed to support gastrointestinal health and immune system function. Fructooligosaccharide (FOS) is also included in this product to assist healthy growth of acidophilus and bifidus organisms. Because this capsule is enteric coated, the product delivers microflora directly to the intestine, bypassing the harsh acidic conditions of the stomach. Our probiotics are stable at room temperature.

Cautions and interactions

A laboratory study suggests that *L. acidophilus* affects the metabolism of sulfasalazine, a medication used to treat ulcerative colitis. The significance of this information is unknown at this time.

During treatment with antibiotics, it may be beneficial to take probiotic supplements at the same time, and to continue them for a couple of weeks after the finish of the course of drug treatment. This will help restore the balance of natural bacteria in the digestive tract.

Immune Renew™

Immune Renew™ is an immune system supporting formulation containing standardized Astragalus extract and a high beta-glucans

proprietary mushroom blend. Astragalus has been shown in clinical and non-clinical studies to support a number of aspects of healthy immune function, including the enhancement of T-cell and Natural Killer Cell activity (6 - 9). Immune Renew™'s blend of eight organic mushrooms provides additional immune support due to its high 1,3 beta-glucan content. 1-3 beta-glucans are especially valuable to immune system response, though they are increasingly lacking in today's typical diet. Scientific studies have demonstrated that the 1,3 form of beta-glucans found in mushrooms supports both innate and adaptive immunity.

Cautions and interactions

Astragalus may interact with the actions of several pharmaceuticals, including antiviral medications (acyclovir and interferon), immune suppression medications (cyclophosphamide and corticosteroids), diabetes medications, high blood pressure medications, diuretics, and anti-coagulant drugs.

Vitamin D3

The discovery of the vitamin D receptor (VDR) in tissues that are not involved in calcium and phosphate metabolism led to the search for other roles for the vitamin. VDR has been discovered in most tissues and cells in the body and is able to elicit a wide variety of biologic responses, including regulation of the immune system (10). For instance, research indicates a critical role for the VDR and 1,25(OH)2D3 in control of innate immunity and the response of the colon to chemical injury (11). It has been suggested that increasing vitamin D intake or sun exposure increases circulating concentrations of 25-hydroxyvitamin D, which in turn, is metabolized to 1,25-dihydroxyvitamin D(3) in prostate, colon, breast, etc. The local cellular production of 1,25-dihydroxyvitamin D acts in an autocrine fashion to regulate cell growth and differentiation (12).

Cautions and interactions

The recognized upper limit for vitamin D supplementation is 2000 IU per day. Supplemental vitamin D should be used cautiously in those on digoxin or any cardiac glycoside or suffering from hypercalcemia.

Additional Support

BioCore™ Enhanced Enzymes™, Borage Oil, Vitamin C-1000
Digestive support (BioCore™ Enhanced Enzymes™) is another element to consider in balancing and maintaining immune function. Incomplete digestion is associated with inflammation, allergies, low-grade chronic immune activation and auto-immune issues.

Borage Oil is a nutritional oil containing over 80% polyunsaturated fats, including linoleic acid and gamma-linoleic acid (GLA). GLA supports healthy immune function, especially prostaglandins regulating inflammation.

Vitamin C, a premiere water-soluble antioxidant utilized by the body to recycle vitamin E and a number of other antioxidants. Because vitamin C is essential for collagen production, supplementation supports tissue renewal.

References available at www.protocolforlife.com

Ultra Omega-3 (Suggested: 4 softgels or 1 tsp. Liquid Omega-3 daily)	_____ X _____
Ortho Dophilus™ (Suggested: 2-4 daily)	_____ X _____
Immune Renew™ (Suggested: 2-4 daily)	_____ X _____
Vitamin D3, 2000 IU (Suggested: 1 daily)	_____ X _____
Additional Support Products:	
BioCore™ Enhanced Enzymes™ (Suggested: 1-2 daily, with meals)	_____ X _____
Borage Oil (Suggested: 2-3 daily)	_____ X _____
Vitamin C-1000 (Suggested: 1 three times daily)	_____ X _____

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

Please note the instructions, cautions and interactions on each product package, and begin each new product separately, in turn. Use only under the supervision of a qualified health practitioner.