

# Protocol for Nutritional **SEASONAL IMMUNITY** Support

Practitioner Information - Protocol For Life Balance™ Supplements

Different times of the year can bring with them different seasonal stresses and demands. This protocol is intended to promote health by adjusting internal factors through immunomodulation and control of inflammatory factors. Other nutrients influence histamine release and gut responses to external challenges. 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) (8).

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 (9). 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™ formulation 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.

## Vitamin C + Bioflavonoids

The lungs are exposed to oxidative stress due to the generation of reactive oxygen and nitrogen species as a consequence of chronic airway inflammation. Increased concentrations of NO\*, H2O2 and 8-isoprostane have been measured in exhaled breath and induced sputum of, for instance, asthmatic patients. O2\*-, NO\*, and halides interact to form highly reactive species such as peroxynitrite and HOBr, which in turn cause nitration and bromination of protein tyrosine residues. Oxidative stress may also reduce glutathione levels and cause

inactivation of antioxidant enzymes such as superoxide dismutase, with a consequent increase in apoptosis, shedding of airway epithelial cells and airway remodeling. Increased antioxidant intake has shown protection against some lung irritants, such as ozone (7).

### Cautions and interactions

Vitamin C may interact with furosemide, a loop diuretic. In addition, high intake of Vitamin C may interact with the metabolism of certain medications, such as acetaminophen and tetracycline. There have been rare case reports of vitamin C interfering with the effectiveness of these blood-thinning medications, although recent follow up studies do not support this association.

Oral contraceptives, cyclosporine and aspirin are known to increase the need for Vitamin C. Vitamin C may be used if taking nitrate medications.

## 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 (14). 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 (15). 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 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 (16).

### Cautions and interactions

The current 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

### A-Biotic™, Aller-All™, Immune Renew™

These support products can be added in combination or separately to address the specific immune challenges of the individual.

A-Biotic™ is an herbal formula containing Allisure™, a clinically tested and patented form of stabilized allicin. Allicin, the main immunologically active component of garlic, is combined with several other herbal extracts that can strengthen the body's defenses against environmental stresses (1-4).

Aller-All™ is a nutrient and herb combination that is designed to provide seasonal allergy sufferers with a natural source of nutrients known for their ability to normalize the body's histamine response, modulate the immune system's inflammatory response, and support the body's healthy overall immune function (6, 7).

Immune Renew™ is an immune system supporting formulation containing standardized Astragalus extract and a high beta-glucans proprietary mushroom blend. Scientific studies have demonstrated that the 1,3 form of beta-glucans found in mushrooms supports both innate and adaptive immunity. In addition, Astragalus has been shown to support a number of aspects of healthy immune function, including the enhancement of T-cell and Natural Killer Cell activity. (10-13)

References available at [www.protocolforlife.com](http://www.protocolforlife.com)

<b>Ultra Omega-3</b> (Suggested: 4 softgels or 1 tsp. Liquid Omega-3 daily)	_____ <b>X</b> _____
<b>Ortho Dophilus™</b> (Suggested: 2-4 daily)	_____ <b>X</b> _____
<b>Vitamin C-1000</b> (Suggested: 1 three times daily)	_____ <b>X</b> _____
<b>Vitamin D, 2000 IU</b> (Suggested: 1 daily)	_____ <b>X</b> _____
<b>Additional Support Products:</b>	
<b>A-Biotic™</b> (Suggested: 1-3 daily)	_____ <b>X</b> _____
<b>Aller-All™</b> (Suggested: 2-4 daily)	_____ <b>X</b> _____
<b>Immune Renew™</b> (Suggested: 2-4 daily)	_____ <b>X</b> _____

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.

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