![Standard Process - Whole Food Nutrient Solutions logo]

Seasonal Immune Support

Developed and reviewed by the clinical, chiropractic, and naturopathic members of the Standard Process team

Seasonal Immune Response

The innate and adaptive immune systems help regulate the body's response to an array of potential allergens from the external environment. The immune system must distinguish between innocuous and harmful environmental antigens to avoid an exaggerated or self-destructive immune response.

Potential allergens like pet dander, pollen, mold, and dust mites are constantly sampled by antigen-presenting cells (APCs) such as dendritic cells, monocytes, and macrophages. APCs process antigens and present them to T cells. T helper 2 (Th2) cells promote the release of immunoglobulins and cytokines. Antigen-dependent activation of tissue mast cells with specific IgE bound to their surface is the central event in acute allergic reactions. IgE sensitizes mast cells to release biologically active mediators like histamine and leukotrienes.

Histamine is important in conditions like allergic rhinitis, urticaria, and asthma. Mast cells represent the most significant source of histamine within the immune system. Mast cells are distributed throughout nearly all vascularized tissues with relatively high numbers occurring near body surfaces including the airway epithelium. In allergic rhinitis, allergens stimulate mast cells, CD4+ T cells, B cells, macrophages, and eosinophils to infiltrate the lining of the nasal cavity and the nasal mucosa. The release of histamine and cytokines leads to uncomfortable symptoms like mucosal edema, sneezing, pruritis, rhinorrhea, and nasal congestion.

Lifestyle and nutritional interventions can support a healthy seasonal immune response by stabilizing mast cells, modulating the histamine response, and reducing exposure to potential seasonal triggers.

Supportive Lifestyle Practices

• Consider sublingual immunotherapy (SLIT) as a strategy to reorient the immune response for individuals experiencing allergy-mediated symptoms. SLIT promotes the synthesis of antibodies that block the allergen-IgE mediated complex to induce an anti-inflammatory environment.[1]

• Recommend saline irrigation of the nasal passages to reduce symptoms of allergic rhinitis. This practice is thought to work by thinning nasal mucus and flushing allergens and bacteria from the nasal cavity.[2]

• Encourage the use of a high-efficiency particulate air (HEPA) filter. Air purifiers that use HEPA filtration reduce airborne allergens like dust mites, animal dander, and pollen and can reduce allergic rhinitis and asthma symptoms.[3]

Whole Foods Nutritional Recommendations

• Encourage intake of foods rich in quercetin, which has been shown to inhibit the production and release of histamine by stabilizing the cell membrane of mast cells and preventing their activation.[4] Onions are one of the richest food sources of quercetin. Other good sources include broccoli, bell peppers, apples, and berries.

• Encourage the inclusion of foods rich in omega-3 polyunsaturated fatty acids in the diet. Resolvins are lipid mediators biosynthesized from omega-3 fatty acids eicosapentaenoic acid (EPA), and docosahexaenoic acid (DHA). Resolvins can facilitate a balanced adaptive immune function and support healthy allergic airway responses by modulating the recruitment of eosinophils, lymphocytes, and macrophages.[5]

• Suggest the use of raw honey in place of sugar. Honey contains phytochemicals such as gallic acid, p-coumaric acid, kaempferol, and caffeic acid that have been shown to exhibit anti-allergic effects.[6]

• Emphasize the importance of consuming foods rich in vitamin D, such as the flesh and liver of fatty fish. Smaller amounts can be found in beef liver, egg yolks, and cheese. Vitamin D helps modulate adaptive immune function and supports mast cell stabilization.[7]

Dietary Supplement Regimen

Allerplex®

Suggested Use: **3 capsules per meal**

- Helps maintain healthy mucous membranes*
- Supports the body's ability to handle environmental challenges*
- Supports healthy lung and respiratory function*
- Vitamin A plays a role in liver function*
- Contains a combination of key ingredients from Pneumotrophin PMG®, Drenatrophin PMG®, Cataplex® A-C, Betacol®, and Antronex®
- Good source of vitamin A

AllergCo

Suggested Use: **1 tablet 4 times daily**

AllergCo contains Albizia, Chinese Skullcap, and Nigella to support a healthy response to seasonal stresses and maintain normal respiratory tract function.* These herbs have been traditionally used in herbal preparations to:

- Respond normally to occasional seasonal stresses*
- Maintain skin and immune system health*
- Assist in maintaining healthy breathing passages to support normal breathing*

Cod Liver Oil

Suggested Use: **3 softgels per day**

- Contains omega-3 fatty acids EPA and DHA
- Supports immune system response*
- Supports healthy inflammatory processes*
- Excellent source of antioxidant vitamin A
- Good source of vitamin D

Antronex®

Suggested Use: **1 tablet per day**

Antronex® contains bovine liver fat extract. Japanese researchers discovered a liver fat extract that was used to support the body's normal detoxification mechanisms.*

Assessment of Seasonal Immune Health

In Office/Physical Exam

- Signs/Symptoms: rhinorrhea, postnasal drip, sinus congestion, sneezing, itching, hives, fatigue, sleepiness
- Medical History: food and environmental allergies

- Key Labs: complete blood count (CBC), c-reactive protein (CRP), 25-OH vitamin D, tryptase, immunoglobulin E (IgE)
- Allergy skin testing
- Standard Process Omega-3 Index Plus Test

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